





# The Cardiff and Swansea Smokeless

## STEAM COAL COMPANY, LIMITED.

Incorporated under the Companies Acts, 1862 and 1867.

CAPITAL £400,000, IN 40,000 SHARES OF £10 EACH.

Of which 26,674 are now offered for public subscription. £1 payable on application; £2 on allotment; £1 on October 1st, 1873; and the remaining £6, as required, in calls of £1 per share, at intervals of not less than three months.

Is intended to declare the first dividend in August next.

No cash payment is made to the vendors, all the purchase-money being paid in shares and debentures; and for the first three years the vendors' shares only participate in dividends after a minimum dividend at the rate of 10 per cent. per annum has been paid to the other shareholders.

### DIRECTORS.

ALDERMAN SIR ROBERT WALTER CARDEN, Royal Exchange Buildings, London.  
 RICHARD SHAW, Esq., M.P., Queen's Gate, W., and Holme Lodge, Burnley, Lancashire.  
 THOMAS COATS, Esq. (J. and P. Coats, Paisley), Ferguslie House, Renfrewshire.  
 J. DAVENPORT SHAKESPEAR, Esq., J.P. for Essex, F.G.S., Ramsgate and London.  
 JOHN CORY, Esq. (Cory Brothers and Co., Cardiff and London), Finchley House, Cardiff.  
 F. A. YEO, Esq. (Cory, Yeo, and Co.), Director of the Swansea Bank, Sketty Hall, Swansea.  
 (With power to add to their number).

### BANKERS.

Messrs. SMITH, PAYNE, and SMITHS, Lombard-street, London.  
 NATIONAL PROVINCIAL BANK OF ENGLAND, London and Branches.  
 THE SWANSEA BANK (Limited), Swansea.

### SOLICITORS.

Messrs. SHARP and TURNER, 31 and 32, Lombard-street, London, E.C.  
 Messrs. INGLEDEW, INCE, and VACHELL, Cardiff.  
 WASHINGTON H. BROWN, Esq., Swansea.

AUDITORS—Messrs. COOPER BROTHERS and CO., George-street, Mansion House, London, E.C.

SECRETARY (pro tem.)—JOHN RUSSELL CLIPPERTON, Esq.

OFFICES (pro tem.)—2, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.

### PROSPECTUS.

This company is formed for the purpose of purchasing and developing, upon a scale commensurate with their capacity, the well-known South Wales Steam Coal Properties called the Pentre and Church Collieries, situated in the Rhondda Valley on the Taff Vale Railway, and within 21 miles of the port of Cardiff; and the Resolven Collieries, in the Neath Valley, on the Great Western Railway, 8 miles from the port of Bristol Ferry, and 13 miles from Swansea.

The combined properties constitute one of the largest and richest coal fields in South Wales, and comprise an area of over 4700 acres, held for unexpired terms of 42, 43, and 95 years, at moderate rents merging into the following exceptionally low royalties:—8d. per ton on large coals, and 4d. per ton upon small, under the Pentre and Church leases; and 6d. and 3d. under the Resolven lease.

As detailed in the engineers' reports, the quantities of coal in these takings are estimated at the enormous total of 115 million tons, which will be equal to a daily output of upwards of 4000 tons for the term of the longest of the leases; and in the latter is included more than three-fourths of the entire property.

The seams at present worked are at the Pentre and Church, the 2 feet 9 inches (averaging 4 ft. 2 in. in thickness), and at the Resolven, the celebrated Resolven vein. These coals have acquired a high reputation in the markets of the world; they are confidently asserted to be among the finest qualities of smokeless steam coals brought to the ports of Cardiff and Swansea, and are extensively consumed for marine, railway, and other purposes. And in proof of the enormous and constantly increasing demand for Cardiff and Swansea coals, it may be mentioned that the shipments from the two ports increased from 2,300,000 tons in 1862 to over 4,000,000 tons in 1872.

A very important feature in connection with the working of the above seams is the total absence of water, whereby the outlay and expense of pumping are avoided, and the roof also in both collieries is so thoroughly good as to effect a material saving in the usual cost of timbering, &c.

These collieries possess exceptional advantages by reason of their close proximity to the shipping ports of Cardiff, Penarth, Briton Ferry, and Swansea; and by means of the Taff Vale and Great Western Railways they are also in direct communication with London, Liverpool, Southampton, and other parts of the Kingdom.

During the four months ending April 30th last, the average output, calculating 260 working days in the year, exceeded 530 tons per day, and the present selling price leaves a profit at the rate of upwards of £70,000 per annum, being equal to more than 25 per cent. per annum upon the amount of the purchase, including the vendors' shares.

The further development of these important properties will include the completion of the large double-banded shaft now in course of sinking at Pentre; the sinking of two pairs of pits to the lower measures, and the opening out, on a more extended scale, of the upper workings at Resolven; the extension of sideling accommodation; and the erection of a number of additional workmen's cottages. For all these purposes it is estimated that an outlay of about £60,000 will be required.

It will be seen from the engineers' reports that the quantity raised can be soon largely increased, and that when the above works are completed the output may be calculated at a daily average of at least 2600 tons. Taking a minimum profit of only 3s. per ton on that quantity, the net return would be £101,400 per annum, or over 25 per cent. upon the total nominal capital of the company. But should prices continue as at present, the profits, it is evident, will be very largely in excess of this estimated amount.

The purchase of the above-mentioned collieries, with all buildings, workmen's cottages, engines, boilers, weighing houses, machinery, horses, railway sidings, and all other plant, has been agreed upon for the sum of £225,000; and the vendors, as a proof of their confidence in the value of the property, have agreed to receive the

### AUSTRALIAN COLLECTION AT THE CRYSTAL PALACE.

"Catalogue of the Australian and South Sea Islands Museum, Descriptive, Historical, and Narrative, at the Crystal Palace, Sydneyham."—By HENRY E. PALY, F.R.S., Victoria. 12mo. Dickens and Evans, 1873.

We find here, compressed into 64 pages, a mass of highly amusing, interesting, and instructive information respecting the manners, customs, implements, arts, and lives of a class of our fellow-creatures to whom we are utter strangers on this side of the globe. They are as much of the *genus homo* as ourselves; they are equally with ourselves "men and brothers," but we realise with difficulty their strange and wild habits, their rude yet ingenious war and domestic implements, their simple manufactures of dress and ornaments, and their frequently horrible pastimes, amusements, and war to extermination. We are severed from this wild romantic race by half the circumference of the globe, inhabiting groups of islands straddled through out the Southern Archipelago—the Fiji, New Hebrides, and other distinct groups—the natives speaking different languages, varying in colour, customs, and Government. This catalogue enumerates 275 articles of native cloths, dresses, war and other implements, and other objects of singular interest and rarity, as the production of them is diminishing as civilisation progresses. Besides these are a glazed case, containing 42 objects of curiosity in combs, hair-pins, armlets, girdles, necklaces, and similar articles. A second glazed case exhibits fish-hooks, ear-rings, beads, a fan, &c. A third case contains mires, spear-heads, sling stones, &c. And a fourth case contains a stone club, stone-headed axe, tomahawk, chisel, cup, &c. Other cases, again, display a miscellaneous collection of musical and other instruments, swords, sticks, and various implements, each numbered and recorded in the catalogue. Besides these surprising objects there are no less than 109 paintings, lithographs, and photographs of landscapes, native groups, settlers, portraits, and six special "City of Melbourne celebrities." The remainder, or Natural History collection, is exceedingly valuable, and cannot fail to attract the attention of all visitors, from the singularity, beauty, and rarity of a large number of the objects, there being 26 cases of insects, butterflies, moths, beetles, spiders, scorpions, &c., five cases of birds' eggs, a collection of marine shells, corals, madripores, reptiles, ferns, sea-weeds, and many other objects in great variety and perfection. And, though last not least, the largest model in the world of Ballarat and its surrounding gold fields.

ENGLISH EXHIBITORS AT VIENNA.—Messrs. Whitley Partners, of Leeds, anticipate that they will have the most extensive collection of improved mechanical inventions in the Exhibition. Their machinery is all of a special character, of the very best quality of workmanship, by well-known houses, designed either by or for them, and so constructed as to turn out large quantities of one class of work. The system adopted in their establishment is such that nearly all the specialties that they manufacture are sub-divided into classes, and the respective parts of each specialty made interchangeable, and from foundry to fitting shops this system is adopted wherever possible. The PEET VALVE appears to have again special satisfaction. Having two valves in one shell not only gives it twice the durability of the globe valve or wh-ol tap, but is a double guarantee against the grit or sediment constantly floating in the current of steam. In addition to these advantages, the Peet Valve Company have brought their castings to a high degree of perfection. They allow none but the very best of gun-metal to be used in their taps. These valves in all their parts, are made by special machinery. Every part is made interchangeable, and can be always duplicated at a trifling cost. COMMON'S AUTOMATIC APPARATUS FOR THE PROTECTION OF WATER-PIPES FROM THE action of frost is another contrivance likely to attract attention; it is designed to prevent the bursting either by emptying the pipes or by allowing a fine stream of water to pass through them as is most convenient, only when the frost is sufficiently severe to endanger them. The action is caused by the motion produced by the freezing and expansion of a small body of water contained in a properly formed hermetically closed thin copper vessel, with which is connected a suitable valve. In times of frost this valve is opened, and allows a fine stream of water to pass through the pipes, thus causing a motion of the water, which is sufficient to prevent the pipes freezing in nearly every case of frost, and the consequent inconvenience of no water, and to prevent, in all cases, the bursting of the pipes. When the thaw comes the stream of water is shut off without any attention. The action in both cases being perfectly automatic, a great point (as all practical men know), and also so quickly follows the change of temperature, that it will shut and open or open and shut the valve, as the case may be, in the course of two hours. This is the simplest and

purchase-money as follows:—£133,200 in paid-up shares, and the balance of £151,740 in debentures carrying 6 per cent. interest, and extending over periods of three, four, and five years.

In addition to receiving the whole of their purchase-money, as above mentioned in paid-up shares and debentures of the company, the vendors have further agreed that for the first three years their paid-up shares shall not participate in profits until after dividends of 10 per cent. per annum have been paid to the other shareholders.

One important feature in connection with the undertaking is that the collieries are to be transferred free of all contracts, and the company will, therefore, have the full benefit of the prevailing high prices, and it is agreed that the company takes the profits arising from the working as from the 30th April, 1873.

An agreement has been entered into with Messrs. Cory Brothers and Co., of Cardiff, and Messrs. Cory, Yeo, and Co., of Swansea, who are among the largest exporters of coal in South Wales, to continue the sale and shipment of the coals upon a moderate commission. This agreement secures the benefit of their valuable connections, and includes a guarantee to the company against bad debts. John Cory, Esq., of Cardiff, and F. A. Yeo, Esq., of Swansea, members of the before-mentioned firms, have also agreed, if so desired, to act as managing directors, without additional remuneration, while the properties are being further developed.

The reports by the eminent engineers, William Adams, Esq., of Cardiff, David Llewellyn, Esq., Pontypool, and E. Daniel, Esq., Swansea, show the great value and exceptionally favourable character of the properties, and the practically inexhaustible supply of coal contained in them. The reports of these gentlemen are also fully confirmed by a subsequent valuation made by Lewis T. Lewis, Esq., F.C.S., Neath.

The only contracts are as follows, namely:—(1.) Agreement, dated the 21st day of May, 1873, made between Thomas Cory and Frank Ash Yeo of the one part, and John Davenport Shakespear, as nominee for the company, of the other part. (2.) Agreement, dated the 21st day of May, 1873, made between John Cory and Richard Cory, jun., of the one part, and John Davenport Shakespear, as nominee for the company, of the other part. (3.) Agreement, dated the 21st day of May, 1873, and made between Henry Russell Evans of the one part, and John Davenport Shakespear, as nominee of the company, of the other part.

Prospectuses and forms of application may be obtained at the offices of the company, of the bankers, the solicitors, and of the brokers, Sir Robert Carden and Co., 2, Royal Exchange-buildings, London, E.C.

The contracts, reports, Memorandum and Articles of Association may be seen at the company's offices, and also at the offices of the company's solicitors.

If no allotment of shares is made the deposit will be returned in full.

### FORM OF APPLICATION FOR SHARES.

(To be retained by either of the company's bankers.)

To the Directors of the Cardiff and Swansea Smokeless Steam Coal Company (Limited).

GENTLEMEN,—Having paid to your credit at the Bank the sum of £  
 I request that you will allot me shares in the above company, and I hereby agree to accept such shares, or any less number than you may allot to me, on the conditions stated in the prospectus, and subject to the Memorandum and Articles of Association of the company.

Name (in full) .....  
 Address .....  
 Profession or business .....  
 Date ..... Signature .....

most useful form of apparatus; it is applicable to any pipe or vessel containing water that needs protection, and gas and water meters, and can be fixed along the side of the pipe or vessel, although it is better in all cases to protect the pipe and not the apparatus. The other arrangements of the apparatus are equally simple. The PORTABLE DRILLING MACHINE, again, is a very useful little tool. Upon an upright pillar with a cranked base, which, for greater strength, is made of cast malleable iron, a cast-iron bearing is made to slide from end to end. The flange of this bearing is out in the mould, and when the two parts are drawn together by the bolts, the bearing is caused to grip the pillar. At the opposite side of the bearing there is a circular face or flange, upon which another bearing with a similar face or flange, bears and turns, one of the faces being recessed, and the other having a corresponding projection turned upon it. The first bearing has circular or quadrant-shaped slots cut in it, through which set pins are passed and screwed into the face of the bearing. The first can thus be turned to any angle on the face of the second bearing, and fixed in position by tightening the set pins. This movable bearing is cast in a similar way to that upon the pillar, and grips a hollow cast-iron crossbar with a forked end. This crossbar is free to move from end to end in the bearing, and also to turn round with it, and when placed in any position can be firmly fixed there by tightening the screws in the flange. In the hollow crossbar a shaft or spindle is placed, with a small fly-wheel (having a handle) keyed on at one end. At the other end a bevel pinion is fixed, working into a bevel wheel, with a long boss that fills the space in the forked end. The second bevel wheel drives a spindle similar to an ordinary drilling machine, which slides within it, but by means of a long keyway and fixed key in the wheel, is made to revolve with it. The feed motion is imparted by a screw working through the forked end of the crossbar, and receiving the end of the drilling spindle. The drills are fixed in the spindle in the usual manner. WARREN'S FEED WATER HEATER is very highly spoken of by American users, though it does not seem to be yet largely known in Great Britain. It is claimed that it furnishes the boiler with a full and steady supply of thoroughly heated water, raised to the boiling point (212°) by means of the exhaust steam, without creating any back pressure on the engine. It keeps the boiler free from incrustation and sediment, as lime and all other impurities contained in the water that can form scale or sediment are separated from it and retained in the heater, leaving the water soft and pure as it enters the boiler. It saves from 15 to 25 per cent. of fuel, because the exhaust steam is used for heating the feed water and furnishing the boiler with a regular supply at 212°—a temperature full 50° higher than water is usually raised by other heaters; the engine is relieved of the back pressure produced by heaters of other construction, and the water is purified before it enters the boiler, so that no accumulation of sediment or scale, which acts as non-conductors of heat, can take place. It saves the boiler by keeping out all sediment. The accumulation of sediment and scale prevents the water from coming in contact with the metal, which consequently becomes overheated and rapidly destroyed; and by preventing the sudden and unequal contraction and expansion of the boiler, which takes place when cold or partially heated water is introduced. A large majority of steam boilers fail from these causes, in one-half, and frequently in one-fourth, the time which they otherwise would last. There is likewise considerable economy in boiler space, in the consumption of water, and in other particulars, which will readily be understood. The entire of Messrs. Whitley Partners exhibits represent no less than 43 distinct mechanical contrivances, but those already referred to will suffice to indicate the general character of the machines shown.

THE KROMSCHRODER AIR GAS.—A public inspection of the working of Mr. J. F. G. Kromschroder's process of making air gas has been made by the invitation of Mr. W. F. Bruff, C.E., at the Great Marlow Gasworks, and the comparative trials in competition with coal gas proved highly satisfactory. The apparatus consists of a chamber about 5 ft. square and 3 ft. high, containing trays of petroleum spirit, over which atmospheric air is forced, in order to saturate it with hydrocarbon vapour. The gas thus produced is of great brilliancy, and burnt well both in the street lamps and in an 18 1/2 inch lamp from the works. Mr. Hastings, the manager of the works, is quite satisfied after three months experience with the success of the process, and Mr. Kromschroder anticipates that the system will be generally used for the illumination of small villages not yet provided with gasworks, as well as by existing gas companies, as a substitute for canal coal, to improve the illuminating power of their gas. The air gas can certainly be very cheaply generated, is inodorous, does not injure the most delicate fabrics or works of art, and is quite explosive. It is estimated that each gallon of petroleum spirit produces an illuminating power equal to 1400 feet of coal gas.

SALE OF MINING PROPERTY.—Mr. Marsh, auctioneer, of Cannon-street, sold the interest in the lands, mines, and minerals of the North Lovell Mine, at Helston, together with the plant, held for a term of 17 years, for £200.

### Registration of New Companies.

The following joint-stock companies have been duly registered:

CAMBERGI SLATE COMPANY (Limited).—Capital 20,000, in 2000 shares. To take over and work the Cambergi Slate Quarries, in the county of Devon. The subscribers are—D. Williams, Plymouth, 50; D. T. Alexander, 50; G. S. Bryant, 50; J. E. Price, 50; J. N. Flint, 50; J. H. Duke, 50; C. W. W. Bristol, 50; W. Tribe, Bristol, 50; and J. H. Smith, Bristol, 50.

SASSO FORT COLLIERIES COMPANY (Limited).—Capital 180,000, in 18,000 shares. To acquire and work mines in Tuscany. The subscribers (who take one share each) are—W. W. Gurnell, St. John's-road, Bristol; James Woodhouse, 10, R. M. Hillyer, Boyson-road, Camberwell; C. W. Faulkner, 6, Belmont-road, Lewisham; and W. W. Pugh, Downham-road, Islington.

QUICKSILVER ASSOCIATION (Limited).—Capital 50,000, in 5,000 shares. To carry on mining and smelting operations in the United States. The subscribers (who take one share each) are—S. E. H. Wainman, 57, Offord-road, James Cooch, 25, Blenheim-crescent; G. Zanvi, 31, Compton-road, Highbury; and David Parry, 3, White Lion-court, Cornhill.

ANGLO-SWEDISH PEAT BALL PATENT FUEL COMPANY (Limited).—Capital 200,000, in 20,000 shares. To obtain the right to use in Sweden and Great Britain Eleor's patent machines for condensing peat for fuel. The subscribers are—William Cook, Bromfield, 200; T. A. Mann, Barnsley, 200; John Cook, Beighton, Derbyshire, 200; Henry Harrison, Mayfield, 18, Finch-lane; W. V. Polly, 18, Finch-lane; T. N. Wilcox, 18, Finch-lane; R. Farrar, 4, Botolph-lane.

KELHAM ROLLING MILLS COMPANY (Limited).—Capital 100,000, in 10,000 shares. To acquire and carry on the Kelham Forge and Rolling Mills, Sheffield. The subscribers are—J. M. Habershaw, Rotherham, 300; Jarvis Ham, Rotherham, 300; George Wood, Sheffield, 400; Joseph Garrib, Sheffield, 400; Henry Pawson, 6, Hounfield-road, Sheffield, 20; C. A. Branson, Bank Buildings, Sheffield, 200; Joseph Bevan, Sheffield, 20.

WILLIAM COOK AND CO. (Limited).—Capital 160,000, in 16,000 shares. To take over the Tinsley Steel, Iron, and Wire Works at Tinsley, near Sheffield. The subscribers are—William Cook, Bromfield, 200; T. A. Mann, Barnsley, 200; John Cook, Beighton, Derbyshire, 200; Henry Harrison, Mayfield, 18, Finch-lane; W. V. Polly, 18, Finch-lane; T. N. Wilcox, 18, Finch-lane; R. Farrar, 4, Botolph-lane.

NEWLAND PATENT BRICK AND TILE COMPANY (Limited).—Capital 20,000, in 2,000 shares. To carry on a brick and tile business in the East Riding of Yorkshire.

STAR AND GARTER, RICHMOND (Limited).—Capital 60,000, in 6,000 shares. For the acquisition of the above hotel at Richmond. Messrs. T. E. H. J. H. Phillips, and Lieut.-Col. Pym will be the first directors of the company.

LLANBERIS COPPER MINING COMPANY (Limited).—Capital 60,000, in 6,000 shares. For the purpose of mining at the foot of the Pass of Llanberis, Carnarvonshire. The subscribers (who take one share each) are—E. J. C. Canning, Great Winchester-street-buildings; A. de Metz, 5 and 6, Great Winchester-street-buildings; W. Gumbrell, 6, Great Winchester-street-buildings.

BRITISH AND CONTINENTAL AFRICA COMPANY (Limited).—Capital 200,000, in 20,000 shares. To carry on trading business with the West Coast of Africa. The subscribers are—J. R. Bailly, Alghurth, Liverpool, 400; J. G. Morris, Alghurth, Liverpool, 400; A. Castellar, Alghurth, Liverpool, 400; Charles Saunders, Walmer-buildings, Liverpool, 1000; L. Mendel, Manly Hall, Manchester, 500; J. Pearson, Newton-le-Willows, 500; and James Tobin, Easton, Cheshire, 500.

HESTER AND COMPANY (Limited).—Capital 125,000, in 12,500 shares. To take over the business of Messrs. J. C. Hester, and also that of the Anglo India Tea Company (Limited). The subscribers are—John Crouder, Falcon-square, 40; H. M. Carter, 52, Crutcheffs-lane; S. T. Martin, Guilford, 50; J. C. Hester, 10, Hester-street, E.C. 5; T. Jennings, 14, Avenue Postney-place, 60; R. E. Harrington, 52, Crutcheffs-lane; and W. W. Bentley, 10, Cornhill, 50.

SUBMARINE SALVAGE ASSOCIATION (Limited).—Capital 50,000, in 5,000 shares. To purchase patents granted to Messrs. Seiler, Gorman, and Christy, jun., for an invention for improvements in the construction of vessels for raising sunken ships. The subscribers (who take one share each) are—T. P. Baker, 20, Broomfield-road, New-croft; W. Brett, Esher, Surrey; C. Chapman, 29, Broomfield-road; W. H. Hall, 45, Phillimore-gardens, Kensington; T. Christy, jun., 155, Finch-street; H. Sutton, 65, Claverton-street, St. George's-square; and W. H. T. Brook, Park-road-villas, Forest Hill.

MANCHESTER JOINT-STOCK BANK (Limited).—Capital 500,000, in 50,000 shares. To take over the banking business at Manchester, hitherto carried on by Messrs. Robertson, Fraser, and Co. The subscribers (who take 20 shares each) are—Thomas Aitken, George-street, Manchester; John Robertson, High-street, Manchester; W. F. Fraser, High-street, Manchester; James Robertson, Booth-street, Manchester; Sigismund Cohn, Portland-street, Manchester; and J. B. McKerrrow, Manchester.

KERMORE FISHERIES AND RESERVOIRS COMPANY (Limited).—Capital 65,000, in 6,500 shares. To establish fisheries and reservoirs for the breeding of fish. The subscribers (who take one share each) are—J. M. Reed, 21, Prince-square, Bayswater; H. C. Forde, 6, Duke-street, Adelphi; J. Noble, Queen-square, Westminster; F. W. Grierson, 1, Duncannon-street, Charing-cross; Thos. Hirsch, 25, Craven-street, W.C.; and T. Stevenson, 18, Gloucester-street, Finsbury.

GREAT GRIMSBY CO-OPERATIVE COMPANY (Limited).—Capital 50,000, in 5,000 shares.

BRITISH AND FOREIGN PAVING COMPANY (Limited).—Capital 50,000, in 5,000 shares. To take over the business and assets of the Asphaltic, Concrete, and Paving Construction and Maintenance Company (Limited). The subscribers (who take one share each) are—H. W. Dixon, 3, King-street, Chislehurst; F. Morphey, 10, London-street, Southwark; D. L. Duval, 46, Cannon-street, E.C. 4; J. King-street, Chislehurst; F. Schofield, Haverstock-street, City-road; E. W. Layton, 4, Leobury; and W. E. Riddick, Effra-road, Brixton.

COAL IN THE ISLE OF MAN.—The Isle of Man Coal Company, with a capital of 3000, in shares of 10 each, has been formed to search for coal, by boring or otherwise, in a large district at the south of the island. A Crown lease, embracing an area of 12 square miles, including the districts of Ballasalla and Derbyhaven, has been obtained, and the lessees have agreed to convey the leases to the company upon the company paying the preliminary expenses and handing over to the lessees 250 fully paid-up shares. The existence of anthracite coal in the neighbourhood of Ballasalla is maintained by many geologists, and the results obtained in 1840 in some trials then made, cause many to be of opinion that it will be met with at a reasonable depth. The idea of the existence of coal in the districts mentioned is by no means new for the *Marks Mercury* of July 9, 1793, it was reported that "the miners who have been a long time past employed near Derbyhaven, in discovering a coal mine said to be in that neighbourhood, have very lately cut their way so far through the limestone as to penetrate 1 1/2 ft. into the freestone, from which circumstance the actually expect to find this valuable coal mine before Lammas; should this expectation be crowned with the desired success, it will prove an immense source of wealth to the island. And five months afterwards the before-mentioned paper announced that "a stratum or bed of coal had been discovered near Derbyhaven, in this island, at the depth of about 60 ft. from the surface of the earth. Should the layer of this useful fossil prove of any considerable extent, it will open to the inhabitants of this island a source of wealth hitherto unknown, and at the present juncture altogether unlooked for." As far as can be ascertained, nothing further was done at Derbyhaven to test the extent of the coal bed or develop its resources; and the explorations at Ballasalla were abandoned in consequence of the company breaking and losing the boring rods. In 1840, in consequence of the discovery of anthracite coal in the Isle of Man, the "Geology of the Isle of Man," stated that "the different layers of the Posidonia schist bed vary both in their lithological texture and in organic contents. The finest and most compact layer, which is worked for ornamental purposes, is characterised by an abundance of the Posidonia and the relics of tree ferns, which we must necessarily regard with interest as indicating an approach, though still at a considerable distance, towards the coal formation of Great Britain." And in another place he remarks that the Posidonia schist contains the bones of *Graptolites*, hardly hitherto known, and carbonaceous fossil; and, on the other hand, we find in it the first and only traces of coal plants met with on the island. But perhaps the most practical report is that of the explorations carried on in 1840, which says that "the measures gone through at Ballasalla are first, 7 yards white sandstone; secondly, 24 yards of layers of limestone, varied from 2 to 7 ft. thick, with intermediate layers of soft blue clay; thirdly, 23 yards of clay; fourthly, 5 yards of ferruginous bands. We intend to prosecute the boring to the clay-slate, in the expectation of a seam of anthracite coal intervening, as it occurs in the grauwacke and clay-slate of the province of Munster, in Ireland, so thick as to be regularly worked for the purpose of burning the lime of the district. It also occurs abundantly in the South of Wales, with bands of ironstone overlying, where it is used in preference to bituminous coal for the smelting of ores and such purposes as require an intense and steady heat, 1 ton of Anthracite being equal to 3 tons of bituminous coal, and producing a better metal." The company now formed is chiefly local, and as it is provided in the articles that 1500 shares must be subscribed for before it is declared duly constituted, intending investors have the guarantee that operations will not be commenced with insufficient capital.

CHEMICALS AND MINERALS.—(Messrs. J. Berger Spence and Co., Manchester, May 22.) Soda: Cream caustic, 60 per cent., 200 to 200. 5s.; white, 200 to 10s.; soda ash, 215-16d. to 35d.; soda crystals, 75. 5s. to 70. 10s.; bi-carbonate, 18d. 10s.; salt cake, 42. 2s. 6d.; Glauber salts, 3s. 17s. 6d.; Borax: Refined, 100s.; Prussiate of Soda: 15s. to 15s. 6d.; Potash: Murates, 60 per cent., at 75. 10s. f.o.b. Prussiate of Soda: 3s. 1d.; yellow, 1s. 4 1/2d. to 1s. 5d.; chlorate, 1s. 6 1/2d. to 1s. 7d.; chrome, 8 1/2d.; potashes, 38s.; pearl ashes, 60s.; Saltpetre: Foreign, 25s.; barrels, 29s. 6d.; refined, 35s. 6d.; Alum: 8d. 5s. for loose lump; in export, 10s. on the one hand, 12s. on the other. Bleaching Powder: At 12. 10s.—Ammonia-Sulphate: 6s. 15s.; ground, 9s.; brown, 16s.; 23 per cent., carbonate, 75d.; muriate, 32s. to 37s.; sal ammoniac, 19s. 4d.; 2nds, 4s. 6d.; Iron Salts: Green and rusty copperas, 70s.; dry copperas, 55s.—Copper Salts: Sulphate of copper, 32s.—Arsenic: 11s. for white powdered.—Acid: Tartaric, at 1s. 7 1/2d.; oxalic, 9 1/2d.; sulphuric, 3s. 10s. to 3s. 15s.; carbolic, 1s. 3d.—Magnesia: Epson salts, 4d. 15s. for refined; 2s. 10s. to 2s. 25s.—Benzole: 30 per cent., 2s. 3d. to 2s. 6d.; 60 per cent., 2s. 9d. to 3s. 9d.; 80 per cent., 3s. 6d. to 4s. 6d.—Wood Pulp: Moist, 14s. 6d. to 15s. 6d.; dry, 14s. 10s.—China-clay, 42s. to 45s. per ton.—Pyrites: Spanish copperas, 15s.; non-copperas, 10s.—Brimstone: Best choice, 6s. 7d. 10d.—Phosphates: High strength, 85s. to 90 per cent., 1s. 4d. to 1s. 6d. per unit; Extramadura, 1s. 3d.; Ordinary, 60 per cent., 1s.; precipitated phosphate of lime, 40 to 50 per cent., 1s. 10s. to 1s. 10s.; super-phosphates, 25 to 26 per cent., 3s. 10s. to 3s. 12s. 6d.—Manganese: Oxide, 145s. for 70 per cent.—Iron Ore: Hematite, 25s. to 30s.; coltite, 7s. 3d. to 8s. 3d.



THE SELF-STYLED PACIFIC MINING BUREAU.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I trust that your readers will be on their guard in respect of the announcement made by Monsieur Berton, calling himself "President of the Pacific Mining Bureau," of his being on his way to America, "having, as he alleges, been requested by some leading mining companies to proceed at once to the Pacific States, and remaining companies to proceed at once to the Pacific States, and remaining companies to proceed at once to the Pacific States." The same trustworthy person upon several mining properties. The same trustworthy person upon several mining properties. The same trustworthy person upon several mining properties.

Now, your own correspondent have already amply demonstrated the utter inability of this precious Bureau to show a valid claim to credit for any statement made by it as to the value of any mining property whatever. One of the writers who communicated with you has distinctly shown that from ignorance, inexperience, and still more from bribery, the reports of its servants and agents would be quite unworthy of regard, and likely to lead to fatal mistakes and ruinous losses. It has, however, been proved again and again in your own and other Journals that "Bureau" may prove one of the most dangerous misleaders that have ever been foisted upon the public.

Considering the existing uncertainty and insecurity prevailing the whole realm of American mining, it is to be hoped that a new element of peril and delusion will not be introduced. Should it be, depend upon it we have not by a great deal seen the end of deplorable ruin inflicted by knavish mining devices in California, Nevada, Utah, &c.

By-the-by, can any of your readers inform me of the real saleable price of the Hudson Gold Mining Company (Limited)? Notice high-down reports, but nobody seems to know anything either of the actual price of the shares or the prospects of the speculation. The price, I believe, are at 8, Finch-lane, and the secretaries or agents Messrs. Albion, Chadbourne, and Richardson. W. AVENS.

Stock Exchange, May 23.

LLYN-PANDY LEAD MINING COMPANY.

The works of these mines have rapidly, and in the most satisfactory manner, progressed, and reference to the report published in our last issue shows that the main level had been driven 120 yards. Accurate particulars of prospects and indications were given in the report in the captain's report. It will be, however, most interesting to the shareholders and to the general public to learn that during the week a large holder of shares, through the official assistance of the representatives of the company, visited the mines without any intention of such inspection having been previously made. This fact will go far to strengthen the confidence of the shareholders in the management of the mine, particularly when they are informed that the details of operations, mineral character, and well pronounced and defined indications of rich deposits, which formed the basis of the first announcement of the directors to the public have been fully and essentially corroborated. Here may be repeated in substance the statements then made.

The Llyn-Pandy set is traversed by a series of lodes running east and west nearly parallel to each other, which have been more or less proved, but selecting those which have been most worked upon—the Rhydy-Mwyn and Pant-y-Mwyn lodes are to be credited with returns during several years to the late stoppage of the mine amounting to 400 tons of lead per month. This yield is confidently asserted may be taken as a fair type of the whole, and when it is stated that for the most part the royalty paid was an eighth—a rather extravagant impost, when lead ore is realised then only 8d. per ton—it is clear to calculate that with dues at 11d. and the market price of lead are a very remunerative scale, the prospects of the company are bright. The period has not yet arrived when the active consideration of capitalists is usually attracted to enterprises in distant districts; and it is with a very true satisfaction we learn that Wales is likely to largely participate in the staple advantages arising from the turn of the monetary tide towards home undertakings.

The Llyn-Pandy appears to be a valuable type of the mineral ground from which those who enter upon an outlay in this industry will derive adequate and permanent returns.

MINING IN THE ST. AUSTELL DISTRICT.—In our columns of this day will be found the short, and altogether unique, advertisement of the recently registered St. Stephen's Tin and Copper Mining Company (Limited), with a capital of £40,000, in 40,000 shares of £1 each. Short notices of the discoveries of tin made in the old St. Austell Mine (one of the best belonging to this company), have appeared lately in the Journal, and the large blocks of tin ore sent to London from this mine have attracted much attention, but we were not prepared to find that all the capital had been privately subscribed, as is now officially announced. In this age of shameless exaggeration it is idle to indulge in mere talk respecting the extent of tin ground discovered in the mines; suffice it to say that one of the directors and the secretary measured the lode at the 30 and found it to be 20½ ft. wide, and rich. This level is from 15 to 20 fms. above the deep adit, and the lode is believed to be standing whole up to grass; this is the only one of the great lodes in this property which, in extent, is as large as the Tincroft, Corn's Kitchen, in Dorset, and one or two other mines, put together, and there are those who think it will also rival in riches all of them put together. Whether these flattering anticipations are destined to be realised remains to be seen. The most vigorous operations will be carried on under the able superintendence of Capt. John Nicholls, of Tynn—one of the most experienced and intelligent mining agents in England—who has been connected with the private working of these mines for the last 10 months. Whilst we heartily congratulate the newly formed company, and also the mineral lords, we cannot but express the sincere pleasure we feel at seeing so promising an enterprise undertaken in such a genuine, business-like spirit.

WEST MILNR MINES.—Capt. W. Francis (May 21), writes:—"In addition to the general weekly notice (which appears among the Mining Correspondence), I feel it desirable, at this stage of the re-opening of these mines, for the benefit of shareholders who may not have had an opportunity of making themselves acquainted thoroughly with the several points of interest attached, to describe the present mode of operations by which it is sought to bring into existence one of a class of mines similar to those of the present Talgoch, Minera, and others, and to those which contributed so largely to the prosperity and renown of the Flintshire mines of the past. The property, which is situated in the limestone district, contains two of the most masterly veins ever worked in the district (the Milnr and Meadow veins), there is, with the unsurpassable advantages of its geological and local position, the certainty of great deposits of lead ore now in existence having been worked as deep as natural drainage could accomplish, and stretching far westward for miles in length past your boundary into what has gained for this particular belt of country the unenviable appellation of "bunchy district," which should not be confounded with these mines in the true belt to which I have briefly alluded. It is to the development of these great lodes, in depth in the limestone formation that this company now direct their chief aim, although desirable trials will, in the meantime, be made above the influence of drainage, and good discoveries may be anticipated within a reasonable time. In order, however, to accomplish these objects, the day-level has to be opened and repaired from the mouth. When this is done, and the veins reached, a suitable place will be selected for sinking an engine shaft of sufficient dimensions for a large pumping engine, so as to drain the whole of the limestone district to a considerable depth below the present drainage, and there can be no doubt that the result will be a great increase in the productivity of these measures for all the runs of ore to the westward by means of the measures dipping into your property, and by reason of the various contributing side branches and counter lodes constantly accumulating in strength of character in this direction, there can be but little doubt of the results which are to follow, and which are anticipated in this neighbourhood with unusual interest."

CORNISH MINE SHARE MARKET.—The market still remains very dull, and but a limited amount of business has been transacted during the past week. The smelters separated on Monday without making a further reduction in the tin standards, as was feared they would do, and this seems to have given a rather firmer tone to the share market, as prices have been a little steadier since, although it cannot be said that the business is much improved. If tin keeps steady at current rates we might think that prices have seen their lowest, and might look for a reaction. The market for foreign tin appears to have been a little firmer during the week, and with coal, &c., a little lower, even at the present quotations of tin, several of the mines would pay very well. The following are the closing quotations:—In Carn Brea, a few transactions at 127½ to 132½; on Wednesday there were a few shares on the market at 124. Cook's Kitchen, 19 to 21, with a fair business doing at the share market rather quiet, at 55½ to 60. East Bassett, 10 to 12. East Pool dull, at 10 to 11. East Lovell, 18 to 19, but little doing. Great Wheal Vor, 6½ to 7, merely nominal. New Roseware, 3½ to 3¾; there was a rumour of an improvement for copper in the bottom of Bickford's shaft, but as shares have gone quiet, we think it cannot be very important. New Lovell, 15s. to 17s. 6d. New Cook's Kitchen, 2 to 2½, but nothing doing. North Roskear shares have declined to 10, 12, and are very quiet. North Croft called 7s. 6d. to 12s. 6d. A fair business has been done in Providence shares, at 9 to 10. Rosewall Hill, 15s. to 17s. 6d. South Carn Brea shares have been freely dealt in, at 4½ to 4¾, and we hear the mine is looking very promising. South Condurrow, 4 to 7; rather more business doing in them. South Croft, 12 to 13, with just an ordinary number of transactions. South Frances, 10, but flat. St. Ives Consols quiet, at 15 to 16. Tincroft shares moderately dealt in, at 50 to 52½. West Chiverton shares quiet, at 10 to 11. West Bassett, 8 to 8½. There seems to be a slight enquiry after Westleton shares, at 43 to 48. West Frances shares quiet, at 10 to 11. Wheal Kitty (St. Agnes) called about 15, but nothing doing. Wheal Seton, 40 to 45. Wheal Tilly, 40 to 45. Wheal Margaret 4 to 5. We call attention to the remarks made at East Seton meeting by Captain Pusey, on the labour question.—West Briton.

HOLLOWAY'S OINTMENT AND PILLS.—Rheumatic and nervous pains are often more provoking than serious complaints. The chilly mornings and evenings will provoke the rheumatic constitution susceptible of these maladies. Nothing affords so much relief as Holloway's ointment well rubbed upon the skin after repeated fomentations. Thousands of testimonials bear witness to the wonderful comfort obtained from this safe and simple treatment, which all sufferers can instantly and successfully adopt without any further advice than is afforded in the accompanying directions. Holloway's ointment, assisted by the judicious use of his pills, is especially serviceable in assuaging the sufferings from cramps, other muscular pains, and the great inconvenience of various veins.

THE ST. STEPHEN'S TIN AND COPPER MINING COMPANY (LIMITED).

Registered under the Companies Acts, 1862 and 1867.  
Capital £40,000, in 40,000 Shares of £1 each.

Formed to purchase and work Wheal Strawberry, Wheal Orchard, Great Dowgas, and Dowgas Trenchment—four well-known rich mines in the parish of St. Stephen's, Cornwall, near St. Austell, Cornwall.

Notice is hereby given, that the CAPITAL in this company having been PRIVATELY SUBSCRIBED, NO APPLICATION FOR SHARES CAN NOW BE ENTERTAINED.

By order of the Board,  
WILLIAM WARD, Secretary.  
Crosby House, 95, Bishopsgate-street Within, London.

WHEAL MARY TIN MINING COMPANY (LIMITED).

Registered under the Companies Acts, 1862 and 1867.  
Capital £50,000, in 10,000 shares of £5 each.

All fully paid, and without further liability.

Of which only 26000 shares have been offered to the public, the remainder having been privately subscribed for by 60 shareholders.

The shares will be allotted in the order of application, and all applications must be accompanied with the full amount of £5 per share, payable either to the South Cornwall Bank, St. Austell, Cornwall, or to the directors.

DIRECTORS.  
HENRY FRANCIS WHITEFIELD, Esq., St. Columb, Cornwall.  
Capt. THOMAS PARKYN, Roche, St. Austell, Cornwall.  
WILLIAM JAMES THOMPSON, Esq., St. Germans Road, Catford Bridge, Kent.

BANKERS—SOUTH CORNWALL BANK, St. Austell, Cornwall.

THE LONDON STOCK AND SHARE AGENCY, 165, Strand, London.  
SECRETARY—GEORGE HENRY CARDZOZ, Esq.  
OFFICES—15, NEW BROAD STREET, LONDON.

PROSPECTUS.

This present limited liability company has been formed for the purpose of taking over, with the object of more extensive development, the mineral property known as Wheal Mary Tin Mine, lately having been worked by a small coal-work company. The cost-book company was formed about nine months since, and divided into 10,000 parts or shares, for the purpose of working a rich vein of tin, which was discovered in a clay pit, known as the Pleyx lode, and which produced from assay 100 lbs. of tin to the ton of stuff, and is now producing as much as 112 lbs. per ton. A steam-engine with 24 heads of stamps was purchased and dressing floors commenced to be laid out, when four other distinct lodes were discovered. No. 1 was found from 15 to 20 ft. wide, and producing 50 lbs. of tin to the ton of stuff; No. 2, about 8 ft. wide, producing 60 lbs. to the ton; No. 3, Pleyx lode, mentioned above; No. 4, about 4 ft. wide, 46 lbs. to the ton; No. 5, 5 ft. wide, producing over 100 lbs. to the ton.

Capt. Tregay, manager of Pedn-a-drea United Mines, in his report says:—"In taking samples I rejected the best stones, and took only what appeared of doubtful value. One of these produced 46 lbs. of black tin per ton of stone, another produced 56 lbs. per ton, and another 112 lbs. per ton of stone. I had this black tin reduced to metal, and it produced 14 in 29, equal to 70 per cent. of very fine metal, which is a very good produce, and considerably above the average of Cornish mines."

The directors, therefore, invite subscriptions for the remaining shares with great confidence, knowing that they will not have to do, like most companies do, expend a large amount of capital in exploring. In Wheal Mary five lodes have been discovered, sunk on, and proved to be richer than the majority of dividend-paying tin mines. The engine is erected, the stamps and dressing floors nearly completed, and there are many thousands of tons of tinstone at grass ready for the stamps, so that large profits must immediately follow the formation of this company.

By the sale of these unalloyed shares now being offered to the public more than sufficient capital will be provided for the purchase and erection of extra machinery, which is now found necessary to render marketable the practically inexhaustible supply of tinstuff.

The mine has been thoroughly inspected and reported on by the undermentioned practical miners, viz.:—Capt. Wm. Tregay, manager of Pedn-a-drea Mines, Redruth; Capt. James Pope, of Redruth; Capt. R. H. Williams, C.E., manager of Charleston United Mines, St. Austell; Capt. Wm. Hancock, manager of Old Treburick Mine, Wadebridge; Capt. S. Symonds, manager of Castle-dinas Mine, St. Columb; Capt. Geo. Stephens, manager of Belodwa Beacon Mine, St. Columb; all of whom concur as to the value of the property.

The directors are all thoroughly acquainted with the property, and Capt. Parkyn, to whom great credit is due for the discovery of the lodes, has consented to continue the management of the mine.

The directors invite the attention to the reports accompanying the prospectus, and an early application for shares. All shares will be allotted in the order of application.

The mine is very extensive, being nearly a mile square, and the lodes run through the entire strata, by which it can be calculated that immense profits are likely to follow the energetic development of the property.

Prospectuses containing detailed reports may be obtained at the offices of the company, 15, New Broad street, London; or of the London Stock and Share Agency, 165, Strand, London.

FORM OF APPLICATION FOR SHARES.

To the Directors of WHEAL MARY TIN MINING COMPANY (Limited).  
GENTLEMEN,—Having paid the sum of £5, being the full amount per share on shares of £5 each in the above company, I hereby request you to allot me that number, and I agree to accept such shares, or any less number which you may allot me, and I thereby authorise you to insert my name on the register of members for the number of shares allotted to me.

Christian and surname in full .....  
Residence .....  
Date ..... Occupation .....

WHEAL MARY TIN MINING COMPANY (LIMITED).  
Notice.—The shares in this company will be allotted in the order of application, and the share lists will close immediately the few remaining shares are applied for.  
By order, G. H. CARDZOZ, Secretary.

NOTICE.  
WHEAL MARY TIN MINING COMPANY (LIMITED).  
NO APPLICATION FOR SHARES in this company can be RECEIVED after MONDAY, the 28th instant. Since the prospectus has been issued an important discovery has been made in the engine-shaft, the lode having been cut worth about £200 per fathom.  
By order, G. H. CARDZOZ, Secretary.

ISSUE OF 3000 PREFERENCE SHARES, BEARING A PREFERENTIAL DIVIDEND OF 15 PER CENT.  
Shareholders will be entitled to the supply of coal from the colliery at wholesale prices, thus placing them in the same position as merchants, and saving them at least 10s. per ton.

THE LLYNVI VALLEY COLLIERY COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.  
Capital £90,000, in 4000 Preference Shares of £10 each.

Bearing a preferential dividend of 15 per cent. per annum, and 5000 deferred shares, which will be entitled to rank for dividend to the extent of 15 per cent. after the preference dividend of 15 per cent. is paid, the balance of profit being divided ratably among the whole share capital.

Payments on Preference Shares—£1 on application, £1 10s. on allotment, £2 10s. at two months, £2 10s. at four months, and £2 10s. at six months after allotment. In the event of no allotment the deposits will be returned in full.

Shareholders paying up in full will be entitled to 6 per cent. interest on calls paid in advance.

DIRECTORS.  
The Hon. ASHLEY PONSONBY (CHAIRMAN), Director of the Submarine Telegraph Company.  
ALFRED HOWARD, Iron Merchant, 3, Leadenhall-street, E.C.  
SAMUEL ALEXANDER JEFFERYS, Director of the North Wilts Bank, Melksham.  
THOMAS MILNES, 4, Euston-square, N.W.  
HENRY R. SHARMAN, 3, Middle Temple-lane.  
(With power to add.)

BANKERS.  
THE NATIONAL PROVINCIAL BANK OF ENGLAND Threadneedle-street, London, E.C., and its branches.

CONSULTING ENGINEER—WILLIAM HABAKKUK, Swansea.

SOLICITOR—JAMES ARTHUR MORGAN, F.G.S., 47, Finsbury-circus, E.C.

AUDITORS—KEMP, FORD, AND CO., Walbrook, E.C.

SECRETARY—W. H. FORBES.  
OFFICES—47, FINSBURY CIRCUS, E.C.

ABRIDGED PROSPECTUS.

The seams of house and steam coal contained in the colliery to be purchased and worked by the above company, and which is held for 60 years from the 1st July, 1872, are estimated by Mr. William Habakkuk, mining engineer, formerly in the employ of the late Mr. Thomas Powell, sen., and Mr. Joshua Richardson, of Neath Mining Inst., C.E., F.G.S., &c., to contain nearly 20,000,000 tons of workable coal, after allowing one-fourth for pillars, waste, &c. The blackband and ironstone are estimated by Mr. Habakkuk at 5,000,000 tons.

It will be seen by the section accompanying the prospectus that there are fourteen workable seams of coal in this property, twelve of which are of an estimated aggregate thickness of 57 ft., and which is calculated to contain some twenty million tons, which would, if worked at the rate of 1000 tons a day, take some 70 years to exhaust; three of these seams crop out on the surface, and can be worked by day or adit level.

The following are among the principal advantages of the undertaking:—

- 1.—That there is an abundance of first-class house, coking, and steam coal, and ironstone on the property.
- 2.—That three seams can be worked by adit level, at a cost of about 7s. 6d. per ton, including royalty, thus saving the usual enormous outlay of capital for machinery and pits until the lower measures are worked.
- 3.—That the colliery is in close proximity to the Llynvi and Ogmore Railway, which is in direct communication with the South Wales shipping ports, and London Liverpool, and all parts of the kingdom by railway.
- 4.—That the profits on the sale of coal, even taken at 7s. per ton instead of 12s.

(the present rate of profit), and the profit from coke at 10s. per ton instead of 20s. per ton (the present rate of profit), are estimated at £34,500 per annum, or equal to 35 per cent. on the total capital of the company, whereas the dividend on the preference shares at 15 per cent. per annum will only absorb £6000 per annum, leaving £28,500 balance of profits for distribution.

The only agreement entered into by the company is dated May 1, 1873, and made between James Humby of the one part, and William Henry Forbes of the other part. Full prospectuses and reports may be had on application to the solicitor or secretary, at the offices of the company, where the original reports and agreement for purchases, and a copy of the Articles of Association, may be inspected.

THE LLYNVI VALLEY COLLIERY COMPANY (LIMITED).

ISSUE OF 3000 PREFERENCE SHARES OF £10 each, bearing a preferential dividend of 15 per cent. per annum.

CHAIRMAN—The Hon. ASHLEY PONSONBY, Director of the Submarine Telegraph Company.

Intending INVESTORS are invited to INSPECT very fine SAMPLES of HOUSE and COKING COAL from Nos. 1 and 2 Rhonda Seams, cropping out at the surface on the company's property, and Specimens of Fire Bricks from two of their seams of fire-clay, just received from the colliery.

They may be seen at Mr. Morgan's offices, No. 47, Finsbury-circus, E.C., any day between the hours of Ten A.M. and Five P.M.

FOR MINING COMPANIES.

GOLD GETTING MACHINERY.  
WALKER'S CELEBRATED STAMPS FOR CRUSHING QUARTZ, TIN, &c.; AMALGAMATORS, RETORTS, QUICKSILVER. Also, his Rotating Wool Press, and all other Machines for the Colonies.  
12, JAMES STREET OLD STREET, E.C.

FOR SALE (ready for delivery), a high-class 18-horse power PORTABLE STEAM ENGINE, with reversing gear, suitable for winding, pumping, &c.  
Also, a 25-horse power, with or without PIT WINDING GEAR.  
FOR SALE, SEVERAL SECONDHAND PORTABLES, with NEW MORTAR MILLS, 5 to 9-feet pans.  
Also, combined VERTICAL ENGINES and MILLS for GRINDING SLAG, SAND, &c.  
BARROWS and STEWART, ENGINEERS, BANBURY.

FOR SALE.  
A DOUBLE-ACTING ROTARY ENGINE, 36 in. cylinder, 9 ft. stroke, With 12 ton FLY WHEEL. All as good as new.  
Also, a 10 ton CORNISH BOILER, With necessary fittings.  
Can be viewed, and particulars obtained, on application to Capt. JOHN PAULL Landlides, Montgomeryshire.

FOR SALE.  
POWERFUL WATER-WHEEL, 42 ft. by 3 ft. 3 in.—A PAIR OF DOUBLE 24 inch WINDING ENGINES. SEVERAL CORNISH BOILERS, in thorough repair.  
The above are in excellent condition.  
Apply to J. C. LANTON and SON, Redruth, Cornwall; who have a large assortment of SECONDHAND MINING MATERIALS, PITWORK, &c., for DISPOSAL.

HORIZONTAL ENGINES, of most approved construction, from 8 to 40 in. cylinder, for WINDING AND GENERAL PURPOSES.  
Some good secondhand HORIZONTAL ENGINES ON SALE, single and in pairs, from 14 inches to 20 inches cylinders, suitable for winding, &c. GOOD BOILERS of all sizes.  
CREASE AND CO., 39, CONGREVE STREET, BIRMINGHAM.

NOTICE.  
MR. HENRY BRIDGES, RAILWAY ROLLING STOCK AGENT, is prepared to FINANCE RAILWAY COAL and other WAGONS on the deferred purchase system: to PURCHASE and SELL NEW and OLD WAGONS; also, to LET WAGONS on ordinary hire, or on purchase lease. He is the Representative of a Railway Wheel and Axle Manufacturing Firm, and acts as Broker for other Material used in the Construction of Rolling Stock.  
Colliery Proprietors and other Owners of Coal, Coke, Iron Ore, or Ballast Wagons, having Stock to Let, temporarily or otherwise, are invited to send particulars, as he has numerous enquiries from parties wanting to hire wagons.  
Offices, 34, Exchange-buildings, Birmingham.

MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for the last 30 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Industry, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS, they are emboldened to offer, thus publicly, their best services to all connected with the mining interest.

MESSRS. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Although the present depression in English mines (owing in a great measure to the enormous losses incurred by the public in American gold schemes) is very great, perhaps there never was a time when some of them had better prospects of success, or when investors could with greater safety embark in a judicious selection. It was with this feeling that one of our firm, after going to Shropshire and Wales, visited Cornwall. Some of his Notes appeared, under the signature of "Argus," in last week's Journal, and we are now prepared with a selected list of mines, which may, we think, be safely recommended.

COMPENSATION CLAIMS ADJUSTED. BOOKS AND ACCOUNTS KEPT IN ORDER. PERIODICAL STATEMENTS or BALANCE SHEETS PREPARED, and COMPETENT CLERKS PROVIDED TO WORK UP ARREARS, or render TEMPORARY ASSISTANCE, at moderate charges; also, DEBITS and RENTS COLLECTED, with promptitude and dispatch, by—  
R. M. RING AND CO., ACCOUNTANTS AND FINANCIERS, 38, BUCKLESBURY, CITY, E.C.

MESSRS. CAMERON AND CO., FINANCIAL AGENTS AND SHARE BROKERS, BRIDGE STREET CHAMBERS, CHESTER.

MESSRS. LISCOMBE AND CO., 39, SOUTH CASTLE STREET, LIVERPOOL.  
Reg to inform their CLIENTS and the PUBLIC that they are PREPARED to do BUSINESS IN ALL CLASSES OF MINING SHARES—English, Foreign, and Colonial—at the closest market prices.

MESSRS. GROSVENOR AND CO., SHAREBROKERS, 88, PORTLAND STREET, MANCHESTER, beg to inform their clients and the public in general that they have for sale a few shares in each of several most promising Progressive Mines, which they fearlessly assert will shortly return to investors enormous profits on a small outlay and at a nominal risk.

N.B.—They are prepared to advance cash to any amount for the purpose of explorations or the purchase of the rights to search for ore in metalliferous districts.

MR. CHARLES F. COLLOM, MINING ENGINEER, INSPECTOR OF MINES, &c. TAVISTOCK.

MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY.  
entee of COLLOM'S PATENT REVOLVING FRAME FOR DRESSING TIN, AMALGAMATING GOLD, &c.  
INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

CAPTAIN ABSALOM FRANCIS, GOGINAN, ABERYSTWYTH, MINING AGENT, ENGINEER, AND SURVEYOR.  
The great success which is attending the opening and working of the Mines in the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABSALOM FRANCIS, induce him to offer his services either to ADVISE, INSPECT, REPORT, or SURVEY, for Mining Companies or private shareholders.  
For terms, apply to Capt. ABSALOM FRANCIS, as above.

CORNISH MINING.—To show the importance of consulting practical authority, I have only to draw attention to the following fluctuations during the current year, and as the various companies are most loudly advocated when at their highest range the uninitiated more especially should act on independent authorities. As a rule, market dealers and brokers are the worst advisers, for they are very often wholly influenced by the surface currents of events. Consultation free, or Selected List of Securities, &c. Attendance 12 to 3 o'clock.

Dulworth, from £67½ down to £55, and dividends from £10 12s. 6d. annually to £1 quarterly; Tincroft, from £2 to £1½ quarterly; and the price of shares from £57 to £55; Truport, from £14 to £10 and £12; Van Consols, from £9 to £8; Providence, from £20 to £10 and £11; West Frances, West Seton, Cook's Kitchen, Devon, North Levant, Wheal Bassett, South Condurrow, and Herodsfoot, from dividend to non-dividend mines, and, in instances, greater fluctuations have transpired. Each of these mines present different and peculiar features, which those practically conversant with mining can alone explain. Every information and data supplied to intending investors by—  
RICHARD TREDINICK, Consulting Mining Engineer, 32, Fleet street, London, E.C.



# GRAND TRUNK RAILWAY OF CANADA. ISSUE OF NEW ORDINARY STOCK.

**NOTICE TO BONDHOLDERS.**  
HOLDERS OF BONDS to bearer desirous of applying for an ALLOTMENT of the NEW ORDINARY STOCK, now being issued, can obtain Special Forms of Application on applying at the offices of the company.

RICHARD POTTER, President,  
JOHN M. GRANT, Secretary.  
Grand Trunk Railway Offices, 21, Old Broad-street, E.C.,  
London, 23rd May, 1873.

# GRAND TRUNK RAILWAY OF CANADA. ISSUE OF £7,500,000 NEW ORDINARY STOCK.

Part of £10,000,000 Stock, authorised by the Act of Parliament passed 3rd May, 1873. The balance—viz., 2,500,000—being reserved to be issued at the discretion of the directors, but not sooner than 1st January, 1875.

## DIRECTORS.

RICHARD POTTER, Esq., Standish House, Gloucester, President.  
THOMAS BARING, Esq., M.P., Bishopsgate-street, E.C., London.  
CHARLES JOHN BRYDGES, Esq., Montreal.  
HON. JAMES FERRIER, Montreal.  
ROBERT GILLESPIE, Esq., 55, Onslow-square, S.W., London.  
KIRKMAN DANIEL HODGSON, Esq., M.P., Bishopsgate-street, E.C., London.  
GROSVENOR HODGKINSON, Esq., M.P., Newark.  
GRAHAM MENZIES, Esq., 32, Queen's-gate, W., London.  
Sir JAMES RAMSDEN, Bart., Barrow-in-Furness.  
JOHN SWIFT, Esq., 23, Great Cumberland-place, W., London.  
Capt. TYLER, Wyvenhoe Hall, near Colchester.  
Right Hon. LORD WOLVERTON, 67, Lombard-street, E.C., London.

## BANKERS.

Messrs. Glyn, Mills, Currie, and Co., 67, Lombard-street, E.C., London.

## SOLICITOR.

J. BRYN BATTEN, Esq., Great George-street, Westminster.  
Secretary—JOHN M. GRANT, Esq.  
OFFICES—21, OLD BROAD-STREET, E.C., LONDON.

## PRICE OF ISSUE, £22 10s. PER £100 STOCK.

PAIDABLE AS FOLLOWS:	
£5 per £100 stock, payable on application.	
5	1st January, 1874.
2	1st April, 1874.
3	1st July, 1874.
3	1st October, 1874.
2 10s.	1st January, 1875.

The directors of the Grand Trunk Railway Company of Canada are prepared to receive applications for the above £7,500,000 stock, part of £10,000,000 stock authorised to be created by the Act of Parliament passed 3rd May, 1873, and in conformity with a special Act of Parliament passed the 3rd of May, 1873. The proceeds of the stock now offered will be amply sufficient to defray the cost of the conversion of gauge and other improvements of the line up to 31st of December, 1874.

The directors have arranged to retain for the company the remaining £2,500,000 stock, which will not be issued before 1st January, 1875, by which time it is expected the position of the undertaking will have so greatly improved as to justify a considerably higher price than the stock now for subscription.

The stock now to be issued will rank for dividend in common with the existing ordinary stock of the company.

By the provisions of the company's Act of Parliament the net revenue of the company, after paying preference charges, is to "be applied in payment of a dividend at the rate of 3 per cent. per annum on the ordinary stock."

The surplus profits, after payment of such dividends, are to be apportioned—in payment of a further 1 per cent. to the preference stocks, and of a further dividend of 2 per cent. to the ordinary stock, making a total of 5 per cent. per annum on the ordinary stock.

The payment of 3 per cent. dividend on the stock now offered for subscription would be equal to 13½ per cent., and a dividend of 5 per cent. would be equal to 22 per cent. on the price of subscription.

The object of the present issue is to carry out the plan of re-organisation sanctioned by the shareholders, by which the railway will be put in a position to develop the traffic existing on the line, and to bring the undertaking into first-class working order.

It is provided by the company's Act of Parliament that—"The Grand Trunk Company shall from time to time give satisfactory evidence to the Governor in Council of the expenditure of the proceeds of the share capital authorised to be raised, which shall be made in the improvement of and addition to the rolling-stock, in the changing of the gauge to 4 feet 8½ inches, the substitution of steel for iron rails, and the providing of additional facilities for the carrying on of the business of the company."

By the expenditure of the proceeds of the issue of the present stock a large increase in the traffic must ensue, and also a great diminution in the working expenses, and the following is a summary of the advantageous results which will be obtained by the company, and which will mainly benefit the ordinary stock.

1.—By the substitution of steel rails for iron the constant breakages, and consequent expense will be avoided, estimated by the President as equal to from £250,000 to £300,000 per annum in the locomotive, permanent way, and traffic departments.

2.—The gauge, which at present is partly broad gauge and partly narrow gauge, will be altered in sections to one uniform gauge, thus saving delay, expense, and damage from the constant shifting of the traffic, and utilising the rolling-stock resources of the railway connections, south and west.

3.—The Buffalo International Bridge across the Niagara River is confidently expected to be opened in August next, and all the cost of transshipping the goods by ferry will be avoided.

4.—A further section of the Intercolonial Railway will be opened by September next.

5.—A reduction of interest on the prior charges of upwards of £130,000 per annum until a dividend at the rate of 3 per cent. per annum is paid on the ordinary capital.

6.—The increase of rolling-stock, which at present is totally unable to cope with the traffic on the line.

7.—A decrease of the working charges and maintenance of the line, from the above improvements, to a normal rate.

8.—The direct communication with the American Railways, by reason of this company's line being altered to the same gauge, resulting in a solid addition to the business of the company.

In spite of the disadvantages under which the company has hitherto laboured of being unable to carry the existing traffic, a steady increase has taken place year by year, the receipts having increased during the last ten years about 100 per cent., the traffic for last year approaching two millions sterling.

The traffic receipts for the last three years show the following results:—

1870	£148,307
1871	1,111,223
1872	1,536,687

Showing an increase in the two years of about 23 per cent., and when the whole of the improvements contemplated are carried out there cannot be a question that the rate of increase will proceed even at a much greater ratio.

That this expectation is well founded may be seen by a consideration of the great increase in the prosperity of Canada during the last few years. In the five years which have elapsed since the Confederation the deposits in the banks of the country have increased from £23,000,000 to £59,000,000, or nearly 130 per cent.

The growth of the home and foreign trade of the country has not been less satisfactory. In the whole of the year 1872 the exports of Canada were £57,000,000, while in the first half of the present financial year they were £58,000,000.

The imports, which five years since were £71,000,000 for the 12 months, are now £72,000,000 for the six months of the current fiscal year.

A country which in such a short period has doubled its home and foreign trade must command confidence in its present resources and faith in its future development.

The remarks of the Honourable Mr. Tilley, the Minister of Finance for Canada, upon this subject point clearly to a great future for the Dominion of Canada, in which, of course, the Grand Trunk Railway must necessarily participate. In the course of his Budget speech, delivered at Ottawa in April last, he said:—"We can bear an increased debt of thirty millions in the next ten years without materially increasing the taxation of the people, while at the same time we are opening up a magnificent country for the millions who will pour into it, and are increasing the strength and power of the Dominion, and making it what I trust it will ever continue to be—the strong right arm of our own British empire."

The mileage of the railway is 1377 miles; and some idea will be formed of the extent of the company's business when it is added that, notwithstanding the rolling-stock on 31st December last consisted of 361 locomotive engines, 340 passenger carriages, and 6769 freight cars, it was unable to cope with the large amount of traffic offered for conveyance.

Finally the directors, whilst not wishing to appear to exaggerate the value of the stock now offered for subscription, do not hesitate to express their opinion that so soon as the traffic organisation on the line and the contemplated improvements are completed the undertaking and its stocks will be placed upon an entirely new footing.

The allotment will be made on the following basis:—£5,000,000 stock is appropriated ratably to the holders of the existing Ordinary and Preference Stocks registered in the books of the company on 23rd May, 1873, in the proportion of £50 new stock for each £100 stock held by them.

Stockholders desiring to subscribe for a larger amount of stock than their pro rata allotment may make application on the accompanying form, which will receive a priority in the appropriation of any balance not taken by the original allottees. The remaining £2,500,000 stock, with the balance (if any) not taken up by the proprietors, will be allotted among applicants who are bondholders not registered in the books of the company, and to the public.

Failure to pay any instalment at the due date will render all previous payments liable to forfeiture.

In the event of no allotment being made the deposit paid will be returned without deduction; and should a smaller amount of stock be allotted than that applied for, the surplus of the deposit money will be appropriated to the payment due on allotment.

Provisional certificates will be issued, to be exchanged when fully paid up, for the ordinary stock certificates of the company, the stock being registered in the name of the holder free of expense.

Application will be made to the Committee of the London Stock Exchange, at the earliest possible date, for an official quotation of the stock now offered for subscription.

Applications, which must be accompanied by the amount payable thereon, must be sent to the bankers of the company, Messrs. Glyn, Mills, Currie, and Co., 67, Lombard-street, E.C., London.

Forms of subscription may be obtained at the offices of the company, 21, Old Broad-street, E.C., London, and of all London stockbrokers.

Grand Trunk Railway Offices: RICHARD POTTER, President.  
21, Old Broad-street, E.C., London, JOHN M. GRANT, Secretary.

23rd May, 1873.

# GRAND TRUNK RAILWAY COMPANY OF CANADA. Issue of £7,500,000 New Ordinary stock at £22 10s. per £100 stock.

**FORM OF APPLICATION.**  
(To be retained by the bankers.)

To the Directors of the Grand Trunk Railway Company of Canada.

GENTLEMEN.—Having paid to your bankers, Messrs. Glyn, Mills, Currie, and Co., the sum of \_\_\_\_\_ pounds, being £5 per cent. on an application for £ \_\_\_\_\_ New Ordinary stock of the company, I request you to allot me that amount of stock, and I hereby agree to accept the same or any smaller amount that may be allotted to me, and to pay the balance due thereon, according to the terms of your circular, dated 23rd May, 1873.

Name (in full) \_\_\_\_\_  
Address \_\_\_\_\_  
Profession (if any) \_\_\_\_\_  
Signature \_\_\_\_\_  
Date \_\_\_\_\_ 1873

# THE FLAGSTAFF SILVER MINING COMPANY OF UTAH (LIMITED).

The SIXTEENTH MONTHLY DIVIDEND, at the rate of FIVE SHILLINGS PER SHARE (or 30 per cent. per annum) will be PAID on SATURDAY, 31st May. By order, J. RENDALL GOLE, Secretary.  
5 and 6, Great Winchester-street, London, E.C., May 21, 1873.

# THE LAST CHANCE SILVER MINING COMPANY OF UTAH (LIMITED).

Notice is hereby given, that the directors have this day DECLARED the FIFTH MONTHLY DIVIDEND at TWO SHILLINGS PER £5 SHARE of this company, payable on the 31st instant. By order, T. F. THOMAS, Secretary.  
5 and 6, Great Winchester-street, London, E.C., May 20, 1873.

# ANGLO-MEXICAN MINT COMPANY.—

Notice is hereby given, that a DIVIDEND will be PAYABLE at this OFFICE on and after TUESDAY, the 3rd June next. Claims to be made (printed forms of which may be obtained at the office) two days previous to payment. Attendance, Eleven to Three o'clock. ALFRED GODFREY, Secretary.

## GREAT AMERICAN RAILROADS.

It may not be without interest to afford a few details with regard to two great American railroads to which our attention has been somewhat directed of late—the Illinois Central and the Pennsylvania. Both these concerns yield their stockholders dividends at the rate of 10 per cent. per annum, but their prosperity is derived from very different sources. The Illinois Central is indebted for its 10 per cent. to the ever expanding agriculture of Illinois; the Pennsylvania owes its vast traffic principally to the immense stores of coal and iron with which the State it passes through is endowed by nature. Still, the coal traffic of the Illinois Central is increasing, having amounted in 1872 to 371,600 tons, an increase of 112,300 tons over 1871. It is not a little singular to find that the business of the Illinois Central suffered temporarily in 1872 from the growth of the American iron trade last year. A large increase in the price of iron stimulated its production very greatly in the United States, and created an unusual demand for the iron ores of Lake Superior for the furnaces of Ohio and Pennsylvania. This state of affairs diverted a large number of vessels from the grain trade, causing a twofold effect upon the traffic of the Illinois Central. It raised the cost of shipping grain from Chicago to Buffalo to almost double the ordinary price, and enabled competing lines leading east to divert grain from wider districts than they had been before enabled to reach. It also caused a dearth of vessels, which, coupled with a lack of warehouse capacity, prevented the Illinois Central disposing freely of grain offered for Chicago, while the working expenses were largely increased. The Illinois Central owns 197 engines, and the total distances run by these engines in 1872 was 5,888,236 miles, an increase of 177,372 miles as compared with 1871. The total charge for locomotive power last year was \$1,283,380, as compared with \$1,228,039 in 1871. \$1,355,466 in 1870, \$1,381,350 in 1869, and \$1,266,532 in 1868. These figures represent the following outlay per mile run:—1872, 21.76 cents; 1871, 21.50 cents; 1870, 25.15 cents; 1869, 25.49 cents; and 1868, 27.57 cents. This charge per mile run would compare favourably with the corresponding cost of locomotive power upon some English railways.

The Pennsylvania is a very important concern, as will be inferred from the single fact that the quantity of coal which passed over it last year was 3,669,071 tons. The Philadelphia and Erie line, which is worked by the Pennsylvania, has thus far disappointed the expectations formed respecting it. This want of success in the Philadelphia and Erie is attributed to the manner in which the line was laid out; instead of crossing the valuable coal deposits of the Allegheny Mountains it passed northward of them. The Pennsylvania also works the United Railroads of New Jersey. The number of tons of freight moved over these lines last year was 2,536,304, including 55,732 tons of bituminous coal for shipment at South Amboy. The Pennsylvania has a large amount of property which is at present practically unproductive. Thus it has, for instance, a controlling interest in 22,194 acres of anthracite coal lands, which will one day prove, in all probability, a very valuable asset. All the branches recently promoted by the company in Pennsylvania have aimed at the development of the growing iron ore or coal interest of the State. A branch opened during the past year to the ore banks in Morrison's Cove, in Blair county, promises excellent results, while a line in course of construction between Louisburg, on the Susquehanna, and Tyrone, on the Pennsylvania system, traverses a country abounding in rich iron ore deposits, which have for many years supplied the charcoal furnaces of that district with ores, which have produced some of the most valuable iron of the Juniata Valley. The ores of this district will, by means of the new branch, be made equally accessible to both anthracite and bituminous coal of the best quality for smelting; and in view of these advantages it opens up a most attractive locality for the manufacture of iron, the demand for which must expand every year, having regard to the increasing cost of the production of iron in Great Britain. An analysis of the ores about to be opened out also shows that many of them are well adapted for the manufacture of Bessemer steel. Before quitting the affairs of the Pennsylvania, we may note that the company has also a "controlling interest" in a line of iron steamers about to ply between Philadelphia and Liverpool. These steamers have been contracted for by Messrs. CRAMP and SONS, of Philadelphia; and the first of them—the Pennsylvania—will be ready for sea this month.

**COAL-CUTTING MACHINERY.**—Messrs. F. HURD and E. T. SIMPSON have invented some improvements in machinery or apparatus for excavating coal and other minerals, and for expanding the air for driving such machinery, and for other purposes, which consists in the use of a cutting wheel, the periphery or stocks in which the cutters are fixed is placed eccentric to the fulcrum on which the cutters revolve. The cutters are moved in or out of cut by a screw and nut acting on a lever. The machine is held in position by a bowl on a lever acting on the face of the coal. The cutters are made of plain square steel. Another part of the invention consists of an instrument or apparatus for heaving up the bottoms of the coal or other minerals after being undercut. The improved apparatus for expanding the compressed air used for driving coal getting or other machines, consists of a retort containing a perforated crucible.

**ARTIFICIAL FUEL.**—Mr. H. HARRISON, of Killenale, Tipperary, in preparing fuel from anthracite dust or culm, or from other coal dust, and in apparatus employed in such manufacture, proposes to incorporate coal dust with clay and salt under edge runners, the mixture being forced by the action of the runners through perforations in the bed of the machines, and being cut off by sliding plates into pieces of a suitable size for use, which are then removed and dried.

Mr. PAINCOTT, of Leeds, proposes to employ powdered, dissolved, or liquefied waste canthow or gutta percha for fuel, either separately or in combination with other substances, such as clay, road mud, fine riddings, or small coal, or dust of coke, also shale, peat, and sawdust; these are thoroughly mixed or agglomerated in a pug mill, and afterwards moulded into any required form in a machine of ordinary construction, and afterwards dried.—Mr. MARTIN RAE, of Uphall, says that the essential features of his invention are—1. The employment and application of certain waste, and by products resulting from the treatment of certain products obtained from the distillation of coal and shale in conjunction with peat for the production of an artificial fuel.—2. To certain peculiar constructions and arrangements of machinery or apparatus for pressing the moisture out of peat by means of pressing or squeezing rollers, and for separating, tearing, or breaking up the fibres by means of rollers with radial bars or spikes.

**WHITE LEAD.**—Mr. W. THOMPSON, of Wandsworth-road, has patented some improvements in the manufacture of white lead, and in the necessary apparatus. The melting pan is made in compartments for regulating the temperature and securing the purity of the blue lead. This lead is made into thin sheets of open texture by pouring it into a revolving cylinder kept cool, and it is granu-

lated by running it into a thin stream between a roller and an inclined knife, and receiving it in water. The sheets and granules are charged on trucks, which are run up rails into the chambers where the chemical reagents act upon the lead, so as to convert it into white lead, the trucks charged with the converted lead being run out at opposite doors.

**NEW METAL CASE CUTTER.**—Mr. CHARLES LUND, of Fleet-street, has patented an improved cutting instrument, which is composed of a pair of arms connected together by a pin joint near their cutting end, while the opposite ends are shaped so as to be conveniently grasped by the hand. The upper edge of the end of the upper arm forms the blade and works in a vertical slot in the end of the lower arm. A spring is placed between the arms at the end of the cutting of the metal case is effected by alternately forcing the levers open. The allowing them to be pushed apart by a spring, the action resembling that of shears. The under side of the lower arm and the under side of the blade are curved so that the instrument may be easily moved along the top of the metal case as the cutting proceeds.

**METALLIC TUBES.**—Mr. W. E. EVERITT, of Birmingham, has invented an improved apparatus for withdrawing the core from the hollow or tubular ingot from which brass, copper, and other tubes are made by the drawing process, but which may also be used for drawing tubes of short length. The said machinery consists of a sliding cross head carrying a pair of gripping piers, the said piers consist of a slow reciprocating motion, which is by a crank pin and connecting rod, the cross head having a short rest at each end of its stroke. This drawing apparatus is used to withdraw with great force from the hollow or tubular ingot, in using the machinery the workman takes the hollow ingot with its core and cutting tool, and introduces into the said hollow core bar the mandril described, and the fore end of the mandril is passed through a collar in front of the drawing apparatus, and being gripped by the piers is drawn by the motion of the cross head through the hollow ingot, which is prevented from advancing by the collar described. While the mandril advances it withdraws by its enlarged head the core bar from the core, and the cutting tools immediately following cut up or divide the core. By the time the cross-head has completed its stroke the mandril has been drawn through the whole length of the hollow or tubular ingot, the hollow core bar has been removed, and the core itself so cut up or divided that it falls from the hollow ingot.

## MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

**VAN CONSOLS.**—This mine is now fast approaching the dividend. Dressing the ore is being actively carried on, and large quantities of lead being brought to surface. The manager writes—"Our ore is turning out as well as we expected; the ore bin is excellently well dressed, and cannot fail to realise a good price."

**EXCELSIOR.**—This mine is now raising good parcels of tin. PENSTRUTHAL never looked so well as at this time; the average value of the lodes is 235s. per fathom.

**WHEEL DAMSEL** is to be offered for sale as a going concern.

**SOUTH ROMAN GRAVELS.**—A most important improvement has taken place this week at Shelfield shaft; the lode is 3 ft. wide, and producing one 2 tons of lead per fathom. The samples brought here to-day are identical with those taken from Roman Gravels. In the add driving to intersect Roman lode a discovery is expected hourly. It is not generally known that a shaft has been commenced not more than 10 fathoms ahead of the end of this level, where a strong masterly lode has been met with 4 fathoms from surface, and this lode is in the exact line of the Roman Gravels lode, which it undoubtedly is. The add level must reach this lode in a day or two, because the underlie of the lode is the level much nearer than the trial shaft. I saw it to-day in the trial shaft. This fact ought to be made known at once, and I hope you will publish it in the next issue.

**BOTALACK.**—The altered position of mining in Cornwall was strikingly shown at the meeting of shareholders in Botalack on Wednesday, when it was stated that whilst compared with the corresponding quarter of last year the tin sold realised 8s. 2d. less per ton, the cost of labour and material had greatly increased, in some cases by 100 per cent. The quarter's working showed a profit of 90s.

**OLD BOTTLE HILL** has very much improved in the 36 weeks, where the lode is 7 to 9 ft. wide, all saving work, and yielding also splendid stones of tin. This is the best point of the mine, and going into virgin ground for 300 fms. long. The agent is of opinion that this will turn out very profitable, but the dryness of the season for the past month or two prevents them from keeping all their stamps going, and consequently from selling much tin.

**SYNDIE DYLLUAN MINE** has just sold over 100 tons copper ore.

The best parcel, yielding a produce of 14½ per cent., brought 11s. 6d. per ton. No. 2, 7 per cent., 4s.; and No. 3, 6½ per cent., 4s. 8d.

**OLD TREBURGETT** is creating some sensation in the mining world. The mine is under the Limited Liability Act, in 27,000 shares, 1s. fully paid up, and 9000 shares (with a preferential dividend of 10 per cent.) of 10s. per share fully paid up, and with no further liability. The mine is now returning about 30 per cent. of silver-lead ore monthly at a profit, and 450s. a year will pay the 10 per cent. preference dividend. It is estimated also, by those who know the mine, that 6 tons per month, which may be got when the next level is reached, would leave a profit of 600s. per month, or 7200s. per year, equal to about 25 per cent. on the whole of the shares after payment of the 10 per cent. dividend on the preference. For instance, to pay the latter would require 450s. a year, and the balance would give 10s. per share on the 1s. fully paid up shares, and 2s. 6d. per share on the 9000 preference 10s. fully paid, and this, on the latter, would be in addition to the preferential 10 per cent.

**BURRA BURRA (Kenwyn).**—Although the engine on this mine went to work only in December last, we are informed that the mine is already yielding returns from one level only—the 30, which very nearly pays current cost, including the dead work of clearing levels, cutting down and timbering shafts, and, as in addition to the 30, they have now nearly cleared the 18 and 40s. levels, and have begun to drive the latter, their returns from these three levels alone will leave a good profit, especially when they begin to take down the upper part of the lode in the 30, which was so productive in the levels above, and which one of the tributers, who cut into it at the last working, described as "A splendid lode of copper 3 to 4 ft. wide, from 2 to 2½ ft. of which was real fine ore, producing rocks of rich copper ore, and which now stands all along the side of the level." They are also completing the necessary work for sinking the shaft down to the 20, in which they will pass through a junction of the lode with a north branch, which will fall into it, and where Capt. Mynne anticipates good results, as it yielded ores in the upper levels. From the indications given by the lode it is expected that blende will give way to copper in the 40 and deeper levels; but whether it yields blende or copper, in either case it will give a good profit in a mine which is being worked so inexpensively. All the above operations are on one lode only, but there are three other lodes to the north, and five more to the south, all of which can be intersected at a productive depth by driving on the cross course at the cost of 1s. 10d. to 1s. 6d. per fathom, and which is now being done at a depth of 30 fathoms as fast as possible. One of these lodes is said to be the same as is yielding such rich tin ore in Wheel Britain, and another is that of North Busy Island. Another copper lode also has been opened on at surface; and of which, Capt. J. Spargo, an old experienced miner, brought up in the district, says, "I never saw a more splendid copper lode placed by Nature in the bowels of the earth than this one, on which you are sinking a trial shaft." With so many and such rich lodes, and the mine being already so far opened and productive as to be paying its way before half of the accessible profitable points on only one out of their many lodes have been reached and utilized, it is difficult to imagine how such a mine can fail to be a speedy and great success, and to be worthy of its rich and productive neighbours.

**COURT GRANGE (Silver-Lead).**—Encouraging news has been received from the mine to the effect that in sinking a new shaft lead ore has been met with near the surface. The work at the mine is being pushed on with all speed.

\* The following mines were received too late for insertion among the Mining Correspondence:—

**CWYMYSTWTH.**—May 19: In Gill's lower level west, on Henry Taylor's lode, the lode is still 3 feet wide, with 1 ton of lead ore per fathom. In the day level east, on the north lode, no lead has been taken down since our last monthly report. We have no alteration worthy of remark in either of our stopes or tribute pitches. We are pushing on our dressing as fast as possible. All our pumping, drawing, and other machinery is in good working order.

**RESTONCHET.**—May 22: The ground in the deep level, driving north, is without change; the men are making very good progress. We have taken the men from driving the cross level north (10 fms. west from No. 2), and set them to drive a cross level north (8 fms. west from No. 2); the gravel to commence with is 4 ft. thick. The cross level south from No. 2 air level (14 fms. west from No. 2) is not looking so well; the gravel is 2 ft. thick, but poor. The cross level south from No. 1 air level (12 fms. west from No. 2) is about the same as last week; the gravel is 2 ft. thick. The striping level north from No. 1 air level (12 fms. west from No. 2) is looking well; the stopes of gravel is 6 ft. thick, 3 ft. of which is of good quality. The air level, driving west from No. 2 (20 fms. north from No. 1 air level) is poor; the gravel is about 4 in. thick. Our dressing machinery continues to go on well.

**LEANORON.**—A. Ede, May 21: The ground in the engine shaft, sinking here, is highly mineralised, with many strings of spar passing through it, and the men are making fair progress.—Flat-rod Shaft: The men have effected a communication with that section of the mine where the run of ore was first discovered in the north, or new lode; and there are now four men working on the ore in the back of the 20, which will produce from 15 to 20 cwt. of lead ore per fathom. The other two men are clearing stuff, and after they have finished I will put them to work on the run of ore passed through in the driving.

**ANCIENT COPPER MINES IN ANGLESEY.**—At the Archeological Institute an honourable secretary read a memoir "On the Copper Mines found at Ffrwd, Anglesey," by Mr. Evans, of Amluch. Mr. Evans described the district from which the cakes had come, and discussed the ancient conditions of copper mining in Anglesey, and maintained that copper was valued by the Romans at 40 times its present value. In the discussion which followed the reading of the paper the Honourable W. O. Stanley, M.P., the Chairman, and others took part.

**SANDWELL PARK SINKING.**—We understand another thin coal was struck on Tuesday evening last. We learn it is about 6 in. thick, with strong clay underneath. This coal is the third discovered, and is about 13 yards below the last one. The sinking is rapidly progressing.—Birmingham Daily Post, May 23, last one.

**MINERAL RAILWAYS IN SOUTH WALES.**—The Narberth Road and Marnelochog Railway, just inaugurated, derives great importance from the fact that it reaches the nearest point to Fishguard and Newport. The mountains above the terminus abound in slate, some of which is of excellent and durable quality.

**CEDAR CREEK.**—The business of mining is being pushed vigorously at present, and all the working claims are in full blast. The Union claims cleaned up for the last run \$2882.20; the Home Ticket, \$2540; the Pacific, \$1720; the Enterprise, \$3606; the Deep Shaft, not for pay but for experiment, \$1720; and the Central, \$4450. These claims are all owned by the Cedar Creek Company, and each run from 40 to 44 days of 12 hour each, according to miners' estimate, though in fact they run from 20 to 22 days and nights. From the commencement to the end of a run the water is not shut off, except for necessary repairs or when



Each claim is supplied from the company's ditches from 500 to 1000 in. of water, besides which the company's sales of water for the month of May 1873, and it is reliably known that the company's net earnings for the month of May 1873, are £16,000. The company have run and fully completed the tunnel, and are shipping an 8-ft. bank, from which they will be most benefited. The tunnel is reaching into the thousands.—*Placer Argus.*

**LONDON GENERAL OMNIBUS COMPANY.**—Traffic returns for the week ending May 18, 1873, 11s. 3d.

Mines.	Tons.	Price per ton.	Purchasers.
10	15	6	Barry Port Smelting Co.
20	16	6	Walker, Parker, & Co.

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# Mining Correspondence.

## BRITISH MINES.

**ABERDAUNANT.**—S. Tox, May 21: The 10 in. level, to drive east of Hill's cross-cut, by four men, at 15s. per fathom, for the month. The 10 in. level, to drive west of Hill's cross-cut, by four men, at 14s. 10s. per fathom, for the month. The ground in each of these ends is more favourable for progress, and of a good description for the production of lead; we have this morning taken from the east end several large stones of good blende, with large spots of lead in them. I have not made any alteration of the price for driving, as the men get very slight wages for the month; the ground is hard for driving. We have cut into level 25 ft. 9 in.; the north wall of the lode is not yet seen. This lode being so large, and with so kindly appearance, there is not the slightest doubt in my mind but large deposits of ore will be found in depth. Should I be correct in this, which I think I am, you have in this mine a lasting and valuable property. Within the last few months we have erected sufficient dressing machinery for the use of the mine at present. We have at surface several piles of work, some of it broken previous to my coming on the mine, and I think, if the piles are all through alike, they will turn out about 50 tons of lead in all. As soon as we clear off some more of this stuff already at the surface we shall set to stop between the No. 2 adit and the deep adit in the intermediate level, where we have a lode to begin to stop on, worth from 2 to 3 tons of lead per fathom. We have 25 hands engaged on the dressing floors, and all the machinery working most satisfactorily. We have finished repairing the worst part of the cart-road for the present, and I have come down to Llanidloes to day with the first cart-load of a ton parcel of lead, and will see it put into the lead-house.

**ABERYSTWYTH.**—John Jones, May 21: On Saturday, the 17th inst., the following bargains were contracted for: Penrhyn Engine-shaft, one month, six men, 10s. per fathom. The 40, east of Bwlch Gwyn, one month, to six men, at 10s. per fathom. Penrhyn tributaries, two months, 12 men, 7s. per ton free to surface. I cannot mention any particular change in any bargain through the mines since my last report. The 40, east of Bwlch Gwyn, is in a fine lode, and I trust soon to report further improvement. All other operations are progressing favourably.

**BALLYCUMISK.**—Capt. Daniels, May 15: Underground Operations: Since the last report we have holed the skip-shaft, so as to communicate with the upper shaft. I hope to have the skip to go to the bottom next week, thence to resume the driving again; we have about 17 fathoms to drive ere we reach the winze under the 210. During the week the men of this winze, who are engaged in cross-cutting north, have cut the point of the old lode, and so far it is of a promising character, composed of grey and yellow ores, with a little mure. The stopes throughout the whole mine still yield fair average stuff with ore. I have nothing new to report of the 185 ft. level and east—Surface Operations: The surface operations continue to progress favourably, though during the week we have had a draw back in jingling line on account of breakage to part of the gear, which is again put to rights, and working well, as also is all other machinery.—Cosheen: Underground Operations: The men of the skip-shaft, under the 56, have got on well this week. The stopes over the 56 has during the week yielded fair average stuff, but the west side of the winze is now worked out. I purpose to put the men now on the east side. The end in the 56 is rather poor; I expect in the course of a fathom or two to reach the upper part of the slide.—Surface Operations: The dressing with machinery continues to progress favourably, and in good condition: 109 tons of ore in stock.

**BAMPFYLDE.**—S. Mitchell, May 19: It being our setting and subside day, everything has gone off satisfactorily. The several bargains at the 112, 102, and 80 ft. levels, together with the stopes, have been let at former price, producing an increased quantity of copper ore. A number of men are engaged on the iron and manganese lodes. We are raising from the different lodes of copper, iron, and manganese, good quantities of ore, which must result profitably.

**BEDFORD UNITED.**—J. Phillips, May 22: An important change has taken place in the 103 west. We have commenced breaking through the lode to-day, and as far as seen it is worth about 4 tons of good quality ore per fathom. This level is in entire whole ground, and appears to be opening another course of ore. No other change to notice since last report.

**BLAEN CAELAN.**—John Davis, May 19: I have this day inspected the lode cut by the costean-pit at Blaen Caellan, and am much pleased with it; it already produces a good quantity of lead and copper, and I am letting out water freely. The lode cut quite south from this is without any change, and is of a good quality. The men will now go a little back to the lower ground, east of the costean-pit, and open up a level on the course of the lode, so as to come in about 6 ft. deeper; this will take about three weeks to accomplish. I firmly believe the lode is heretofore, although the pit is too shallow to expect it to be competent.

**BLUE HILLS.**—S. Bennetts, A. Gripe, May 17: The 68, east of Letcher's, is slightly improved since the last week, the lode being a foot wide, containing some good stones of both tin and copper, and I am letting out water freely. The 13, east of Joy shaft, is just now passing a cross-course, by which the lode is unsettled; beyond this we expect shortly to meet with the run of tin ground found around the Joy shaft south of the heave. The stopes here are worth respectively 6s., 9s., and 12s. per fathom. The tribute pitches continue much the same as for some time past.

**BOG.**—T. Harris, J. Barkell, May 21: Engine Shaft: Since last week we have forked the water about 2 feet below the 145, and have explored that level 64 fms. west of shaft by crawling over stuff, broken timber, &c., and we find there will be a great many fathoms of good payable ground both for lead and blende come away on tribute as soon as the level is cleared and secured. The level is closed up about 6 fms. east from shaft, therefore we cannot say how far it is driven in that direction. Friday next being our setting a full report of the tribute department shall be sent you next week. We sampled yesterday 25 tons lead and 50 tons blende, for sale on the 28th inst.

**BYNAMBORE.**—G. Spargo, May 21: The engine-shaft will be completed to the 32 by the end of the present week, when we shall commence to drive each way of the shaft, also sink and cut trip plat. I have commenced stoping between the 12 and 12 ft. levels, and will report further on it in my next. We are preparing a parcel of ore for the market as fast as possible; so far the stuff we are dressing is equal to my expectations. Other parts of the mine are without alteration.

**BRONFLOYD.**—John Davis, May 21: In No. 3 shaft, 96 west, the lode is stripped home nearly to the end, the value of which for lead ore is 1½ ton per fathom; and this morning I set the lead to four men, to extend the level west, at 24s. per fathom. In the 84 west, Balcorn's cross-cut south from this is without any change, and still produces spots of lead ore occasionally. The winze sinking under this level produces 10 cwt. of lead ore per fathom. In the 62 east the cross-cut south produces ribs of lead ore about 1 in. wide, with no sign as yet of the footwall. The stopes throughout the mine are producing their usual quantities of lead ore. In No. 2 shaft, 62 west, the cross-cut south has passed the branch lode of carbonate of lime, and is now in a clear clay-slate rock, which is tight for driving. Drawing and dressing are progressing regularly, and the machinery is in good order.

**BRUXN.**—J. Frudger, May 22: It is gratifying to hear that the directors of the company have been here to examine and investigate this property, and more especially that they have gone away perfectly satisfied of the great success they have before them. From the great discoveries already made, especially the two east and west, which are important lodes, each yielding large quantities of tin, and improving in development as depth is being attained; the lodes are becoming wider, and more productive of tin, and the mine can be cheaply worked in sinking, driving, and stoping the ground. The whole of the stuff is being brought to the surface, and is being sold at 10s. per ton, and is in the back, and is now fully 3 ft. wide in the bottom of the level, and will in all probability widen as the lode goes down, a conclusive evidence that we have the master tin-bearing lode of the district, and I am convinced that there is no mine in this locality that can show such favourable features for investment of capital. The future sales of tin will establish this fact.

**BUDNICK CONSOLS.**—John Rawlings, May 21: Since my last report there is no important change. We shall have our tin ready by the time next week a full report shall be sent you.

**BURRA BURRA.**—J. Brown, T. Jenkin, May 21: Tanner's engine-shaftmen are now planking down the shaft to send down the sinking-lift, and we shall commence to clear up the shaft below the 40 next week. In the 40 ft. level, east of Tanner's engine-shaft, the lode is 4 ft. wide, principally spar and flookan, with good stones of copper ore—a very kindly lode. In the 40, east of Tanner's engine-shaft, we are now clearing the stuff, and hope to resume the driving of the end next week. The end in the 30 cross-cut south is letting out a little more water; the water is being pumped out, and the lode is being worked on.

We hope to complete the cutting down of the eastern shaft to the 18 fathom level by the end of the present month. No. 1 stop in the back of the 30, west of Vial's winze, is worth for blende 2 tons per fathom. No. 2 stop in the back of the 30, east of Vial's winze, is worth for blende 2½ tons per fathom. No. 3 stop in the back of the 30, west of Jenkin's winze, is worth for blende 2 tons per fathom. No. 4 stop in the back of the 30, east of Jenkin's winze, is worth for blende 1½ ton per fathom, and at this point next week we shall take down Berryman's copper lode, when we will send you the result. We are getting on well with our two parcels of blende for our next sampling, and are pushing on all operations as fast as possible.

**BURROW AND BUTSON.**—D. R. Stickland, John Christophers, Henry von Uster, F.R.S., May 21: All our levels, ends, and stopes are much as reported last week, unless improved, if there is any change to notice. The weather being stormy again, the air in our levels is extra bad and windy; but this will be remedied now in a day or two, by clearing up shafts and winzes. Our steam-crusher is now fairly at work, and we shall soon be able to put our dressing-floors and jiggling machines into satisfactory order. Our pumping-engine is required to do only two strokes per minute at present, the back water having much decreased. We have fine piles of blende at surface, apparently of as good quality as was ever produced in our country. We have sent a small parcel of our jigged work to our company's office, in London.

**BWADRAN CONSOLS.**—R. Northey, May 17: The new engine-shaft has been sunk 9 fms. 3 ft. below the 55; the part of the lode carrying down in the shaft is producing good lead ore for dressing, and looking very promising for the 65 fathom level. We have put two men to drive the 55, west of new shaft; the lode is 2 ft. wide, composed of quartz, jack, and lead ore, but not enough to value. The two stopes in the back of the 55, east of new shaft, are without any change to notice, worth about 15 cwt. of lead ore per fathom. The western stopes in the back of the 45, west of new shaft, are worth about 10 cwt. of lead ore per fathom. We have 15 tons of lead ore dressed. All the machinery is working well.

**BWLCH CONSOLS.**—R. Northey, May 19: I see no change in the lode in driving the 90, west of Ritchie's shaft; it is about 2 ft. wide, composed of killas, quartz, and spots of lead ore. The progress in sinking the old engine-shaft below the 70 is slow in consequence of our not having been able to keep the required number of miners in sinking, as there are large numbers of men constantly leaving the district for other parts of the kingdom, but we hope to make up a full party shortly. We shall be prepared at the end of this week to sample 20 tons of lead ore of the usual quality waiting your reply. The machinery is working well.

**CAEOYNON.**—T. Hodges, May 21: Setting Report: In the 70 ft. level north cross-cut we are passing through a strong, hard, porous lode of a very favourable kind, the matrix of which is identical to the upper levels, where we had good work at 90, per fathom. The 40 west end, to four men, at 9s. per fathom. No change here: I believe that we have the main part of the lode standing in the side. We are pushing this end as fast as possible to reach Richards's winze, where we shall cut fairly through the lode, to prove its value. Richards's winze, below the 80, to two men, at 12s. per fathom, the lode in which is worth 8s. per fathom. The stopes east of Evans's winze, below the 80, to two men, at 4s. per fathom; worth 8s. per fathom, and improving. The stopes in bottom of the 40, west of Jenkin's

winze, to two men, at 3s. 15s. per fathom. This is for a trial stop; we had good lead over. The stopes east of said winze, to two men, at 3s. 15s. per fathom. I will report the value of this in my next.—South Lode: The stopes in the bottom of the 20, west of Davis's winze, to four men, at 3s. 10s. per fathom; worth for lead and blende 8s. per fathom. The stopes in the back of the 20, west of blende winze, to two men, at 3s. per fathom; the lode is worth 5s. per fathom. The stopes in the back of the 20 east, to two men, at 3s. 15s. per fathom, worth 6s. per fms. The adit level is driven west of cross-cut, on the caunter lode, about 7 fms.; the lode in the end 9 in. wide, principally of soft killas, poor for mineral—suspended. The machinery throughout the mine is working well, and the pay and setting passed off satisfactorily.—Since writing the above the men are up from underground, and bringing with them some good stones of lead from the 70 cross-cut. The stoping upon the lode commenced from the cross-cut in the footwall, which will be an important discovery. Our shaft is already sunk 40 fms., and we have now only 18 fms. to unwear. The machinery is working well.

**CARN CAMBORNE.**—George Rowe, William Penberthy, May 17: The engine-shaft is down to the 85, with the necessary timber fixed to support the sinking lift. The stoping upon the lode commenced from the cross-cut in the footwall, which the lode has a very kindly appearance, without any particular change, worth 60s. per fathom. The winze sinking below the 85, on the north lode, is worth 20s. per fathom. The stopes in the back of the 60 is fallen off in value and suspended. The lode in the stopes in the bottom and back of the 50 is worth 10s. per fathom. All other points of operations are without change.

**CASTLE-AN-DINAS.**—S. Symons, May 22: Six men are engaged in driving the 25 north, which has been extended about 7 ft. during the past week. We have not yet passed through the elva, but as we have driven upwards of 10 fms. through it a change of ground is very shortly expected. I calculate it will take about two months to drive the level to reach the new engine-shaft. Should the ground, however, turn more favourable, as is supposed, it will be reached at an earlier period. Every effort is used to expedite the sinking of the new engine-shaft with a full party of men. It will be sunk to the 25 by the time the level is driven up. The shaft is timbered and eased from the top to the bottom, and I shall at once commence to cut a plat. Another party of men are engaged about the incline-shaft, which will be prosecuted with all possible dispatch, and as soon as I can I shall engage a party of men to drive the 25 east. About 8 fms. have to be driven to reach the point where the new incline-shaft will come down. The completion of all this work to the 25 will thoroughly open the mine 10 fms. below the present workings, and be the means of laying open a considerable quantity of rich tin ground, found by assay to be worth 25 lbs. of tin to the ton from the 15 to the 25, which is quite sufficient to leave a good profit beyond the working cost. All other operations are in a satisfactory and forward state.

**CELEBRAL.**—J. Mitchell, May 22: We forked the water in Colonel's engine-shaft on Monday morning last, and are now busily engaged in putting the adit in thorough good working order, which being done we shall at once resume sinking the shaft with the utmost force that can be brought to bear thereon, and I believe in a short time we shall be rewarded with a course of copper ore. Doctor's lode is without any change worthy of remark since last report.

**CEFN BRWYNO.**—J. Paul, May 20: We have laid down railroad at the 104, east of shaft, and the level is now being driven east of winze with full dirt, and the lode is 4 ft. wide, containing a mixture of lead and blende, and we hope soon to open out a good lode here. In the stopes over the 104 ft. level, 5 fms. east of shaft, the lode is 4½ ft. wide, yielding 12 cwt. of lead ore per fathom. The stopes over this level, 20 fms. east of shaft, is being worked by six men, and



the shaft, which is very desirable. The north lode in this level is pronounced of lead per fathom, very promising for an improvement, and ground easy for progress. In the cross cut driving north in the 35 there is no change; according



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little ore, with mundie and blende, but hardly enough to value. There is a little ore in the rise in the back of the 55, east of shaft, and is improving; we think it is close to a good lode. The lode in the winze below the 40 over the above rise is looking well, yielding over four tons of good ore per fm. There has not been much of the lode taken down in the stopes in the back of the 40, west of shaft, since our last report, as the men have been employed putting in stull. We sampled 494 tons of ore in the shaft, and the driving of the lode is the last we heard of.

**WHEAL ALICE.**—J. Nicholls, May 23: Good progress has been made in clearing and timbering the shaft, and all other work going on satisfactorily. The tin stopes in back of adit are yielding good tinstuff, and I am pleased to say our prospects are very cheering.

**WHEAL ARGUS.**—T. Trahair, May 14: The men in Hitchins's shaft have completed cutting bob-hole and cistern-pit. We shall begin at once to fix the pitwork in the shaft. The stope in the back of Collier's shaft is looking just as last report, and I think they will complete the engine-house and boiler-house next week. There is no change in any other part of the mine.

**WHEAL BASSETT AND GRYLLS.**—W. Oats, P. Prisk, May 21: There is no change of importance to notice in any of our tutwork or tribute bargains since last report, everything being in regular working order, and pushed on with all possible speed. Our adventurers' meeting for 16 weeks will be held on Wednesday next, the 25th inst., when a full report, detailing the different points of operation will be presented.

**WHEAL BULLION.**—Charles Thomas, May 21: Hocking's shaft is still sinking by nine men, and they are making fair progress; we have here occasional good stones of tin. The 124, driving east, is much the same as last reported. The cross-cut in the 114, to cut Stevens's lode, is in a good channel of ground for producing tin; during the past fortnight we have cut several branches, all containing tin. The stope in the 92 is worth 10 $\frac{1}{2}$  per fathom. The stope in the 102 fathom level is worth 20 $\frac{1}{2}$  per fathom. The 80, driving west on the copper lode, is worth 4 $\frac{1}{2}$  per fathom. The tribute pits are looking well, and are very much improved.

**WHEAL COATES.**—W. H. Martin, May 20: The shaftmen have fixed the beam and cistern for the drawing-lift at the 10 fm. level, and are now engaged fixing winze-brace. The 10 fm. level is driven east of cross-cut 5 fms. 4 ft.; the lode for the last 12 ft. is not so productive. The winze below the 10 is down 5 ft.; the lode is worth 10 per fathom. The 10 end west is driven 4 fms. 5 ft. west of cross-cut; it is worth 14 $\frac{1}{2}$  per fathom. No change to notice in the stopes since last advised.

**WHEAL FRIENDSHIP.**—May 19: Bennett's Lode, west of Wilson's shaft, is cut. At the 150 driving east the lode is 4 ft. wide, yielding 2 tons of copper ore to a fathom. A stope in the back of this level is yielding  $\frac{1}{2}$  ton of copper ore to a fathom. There is not any change in the cross-cut driving south at the 100; the ground continues favourable for driving, and worth at present 2 $\frac{1}{2}$  lbs. per fathom.

**WHEAL GREEN ISLE.**—E. Hosking, W. Bennets, May 17: The lode in the 110, driving east, is worth 13 $\frac{1}{2}$  per fathom. The lode in the 120, driving east, is worth 45 $\frac{1}{2}$  per fathom. The lode in the 120, driving north shaft, is 2 ft. wide, and worth 10 $\frac{1}{2}$  per fathom. The lode in the 120 west is 2 ft. wide, and worth 6 $\frac{1}{2}$  per fathom. The lode in the 120, east of new shaft, is yielding a little tin. The rise above the 110 is worth 20 $\frac{1}{2}$  per fathom. The stope below the 110 east is worth 20 $\frac{1}{2}$  per fathom. The stopes above the 110 are worth 10 $\frac{1}{2}$  and 12 $\frac{1}{2}$  per fathom. The stope above the 100 is worth 20 $\frac{1}{2}$  per fathom. The lode in the 100, driving east, is worth 10 $\frac{1}{2}$  per fathom. The lode in the 90 east is still without change. The lode in the 80 east is 15 in. wide, and worth 9 $\frac{1}{2}$  per fathom. The lode in the 66 east is 2 ft. wide, and worth 8 $\frac{1}{2}$  per fathom.

**WHEAL KITTY** (St. Agnes).—S. Davey, John Williams, May 17: New Shaft, Pryor's Lode: The lode in this shaft, sinking below the 130, is worth for tin 14 $\frac{1}{2}$  per fathom. In the 130, driving east of shaft, the lode is worth for tin 12 $\frac{1}{2}$  per fathom. In the 130, driving west of shaft, the lode is worth for tin 14 $\frac{1}{2}$  per fathom. In the 115, driving west of shaft, the lode is large, and not producing tin sufficient to value. The lode in the 100, driving east, is worth 10 $\frac{1}{2}$  per fathom. The lode in the 100, driving west of shaft, the lode is worth for tin 13 $\frac{1}{2}$  per fathom. The lode in the 100, driving east, the lode is worth 10 $\frac{1}{2}$  per fathom. The lode in the 82, driving west of shaft, is worth for tin 6 $\frac{1}{2}$  per fathom. The lode in the 20, driving east of shaft, is worth for tin 10 $\frac{1}{2}$  per fathom. The lode in the 90, driving east of engine-shaft, the lode is worth for tin 8 $\frac{1}{2}$  per fathom. The lode in the adit level, driving west of eastern boundary, is still disordered.

**WHEAL LUCY.**—H. W. Davis, May 21: We have resumed the driving, north and south of the new shaft, at the 20 ground is congenial for mineral, and is favourable for driving. The stope on Carbus is much the same as when last reported.

**WHEAL MARY.**—T. Parkyn, May 22: We are now engaged in laying in the beds of the stamps, and also laying down the ties, hoppers, &c. I have also a new ram-wagon made for tramping the tinstone to the stamps. The lift of pumps is now at St. Austell railway station, and will be brought home at once. We have plenty of water in the engine-shaft, and are not able to sink much deeper till the water in the 100 is low. The lode in the shaft is looking well, and we have no alteration to report to you on any of the other lodes. We are pushing on everything as fast as possible. Mr. John Hocking, jun., engineer, of Redruth, has been over the mine with me inspecting the engine. He has also made drawings for shaft, crank, &c., which I have handed in at the foundry for casting. In fact, everything is being got on with, and not a moment shall be lost in setting to work the engine, stamps, &c.

**WHEAL MARY.**—J. Nicholls, May 22: Wilson's engine-shaft has been coming down to water—the sinking is suspended for the present. The engine is engaged clearing up the old workings on a caunter lode to the north of Wilson's. This lode where seen is 3 ft. wide, of a most promising character, and produces good stamping work for tin. We hope to say more on this point in a few days, as we hope to reach the bottom of the old workings shortly. No other change.

**WHEAL RUBY.**—J. Richards, May 21: In driving the adit level west by the side of the new shaft, the lode is 10 ft. wide, and the face of the lode shows some spots of ore. We are driving a little faster than ever, and hope to reach the intersection with the cross lode in about six weeks from this date, where I look for an important change in the lode and mineral to value, particularly as we have found tin in the lode west of cross lode near the surface in postearing, and below where nothing has yet been done.

**WHEAL TREGOSS.**—T. Parkyn, May 22: I am pushing on the south cross-cut with all dispatch and the ground is favourable for driving. We are also driving east and west of the north cross-cut on the north lode, and are making very good work for tin; the lode is 6 ft. wide, and a most promising lode indeed. I shall be able to report more fully on it after we have driven further on its course. All things are going on well.

**WHEAL UNY.**—W. Rich, M. Rogers, S. Coade, jun., May 17: The lode in the 30, east of King's shaft, is improving, now yielding excellent stones of tin. The 50 east is worth 6 $\frac{1}{2}$  per fathom. The 100, driving east, is worth 10 $\frac{1}{2}$  per fathom. The 80 east is worth 10 $\frac{1}{2}$  per fathom. The 100 east is worth 6 $\frac{1}{2}$  per fathom. We have King's skip-shaft, complete, for hauling to the 100, and holed to the 130. The 110 east is worth 6 $\frac{1}{2}$  per fathom. The 120 east is worth 15 $\frac{1}{2}$  per fathom. The 130 cross-cut south, towards Hind's shaft, is extremely hard. The 140, east of Gooding's shaft, is worth 8 $\frac{1}{2}$  per fm. The 150, east of shaft, is worth 12 $\frac{1}{2}$  per fathom. We have set to cut down Hind's shaft below the 20 to nine men, at 11 $\frac{1}{2}$  per fathom.

**WHEAL UNY.**—J. Richards, May 21: We are getting on better in sinking Pyne's shaft; we shall be deep enough at the end of this month for driving cross-cuts to the lodes. The level driving back (west) from the 13 end north on Goddard's lode, is at present unproductive for lead in the end, but it is still in the bottom of the level; it appears we are just passing along the top of the ore ground here. The 13 fm. level, driving north, on Goddard's lode, has improved; the course of lead and blende has risen a little higher, and also widening. The 10 end, driving east, is looking well, and is yielding good work. The stope on Goddard's lode has improved a little, but we cannot get much ore from it, until we have opened out more length upon it. The stope on same lode, between Nos. 1 and 2 shafts, is worth 15 cwt. of lead and 1 ton of blende per fathom, but ground very close and hard. The parcel of lead and blende has all been discharged. Our dressing and other surface work is going on as usual. I have two men tunnelling and otherwise tracing the lodes lying between the grating-floors and the big wheel, by which I hope in a little while to throw more light on the character and value of the lode.

**WHEAL WHISPER.**—John Moss, May 22: In the month past we have been taking down a stope on the north side in virgin ground, and I find our work much improved. I purpose to carry this stope to the intersection of the Mackenzie lode, where a good deposit of tin may be expected. The mine is looking well at all points of operation. There have been some local enquiries for shares lately.

**MILNER'S FIRE-PROOF MAGAZINES.**—The official certificate of Major V. D. Majendie, R.A., Government Inspector of Gunpowder Works, giving the result of the trials of four fire-proof magazines constructed by Messrs. Milner and Son, for storing small quantities of gunpowder in and about dwelling houses, shops, warehouses, and crowded localities, states that in three of these magazines (each designed to resist six hours) there was placed—a, a few grains of gunpowder in closed tin canisters; b, 10 lbs. of gunpowder in ten 1 lb. closed tin canisters; c, 23 lbs. of gunpowder in a wooden powder-barrel/quarters-sized headed up. The fourth magazine designed to resist eight or nine hours, contained 10 lbs. of powder, half in a wooden barrel/quarters-sized headed up, and the other half in a wooden barrel/quarters-sized headed up. The result of the trials was that in all three magazines the powder was unexploded, and in the 16 in. internal capacity—4258 cubic inches, and were intended to contain 100 lbs. of gunpowder. The whole of the magazines were exposed to the intense heat of a large fire of coal, made up inside an open circular brick-furnace, built for the purpose in the Plumstead Marshes, outside Woolwich Arsenal. The magazines were completely enveloped in the coal, and the draught being good the heat to which they were exposed was intense. The test was pronounced by the various superintendents of the military magazines, and the officers who were present to be very severe, and more than satisfy the conditions intended to be represented. No magazine was removed at the end of six hours, and the powder was found to be unexploded and unaltered, except that a small portion in paper had become wetted, and the vapour had slightly damped some of the powder in one of the canisters. No. 2 resisted 15 hours 52 minutes, when its contents exploded. No. 3 resisted 18 $\frac{1}{2}$  hours, when its contents exploded. No. 4 resisted 22 hours when the fire was purposely extinguished, and the safe and its contents examined. The safe was in good order, and appeared capable of resisting for a considerable time longer. The powder was unexploded. Major Majendie states that with regard to the magazines which exploded, after 15 hours 52 minutes and 18 hours 45 minutes respectively, there is very little doubt that the explosion ultimately resulted from the burning away of the iron, and the penetration of the flame on the side on which the magazine was most exposed (by the action of the wind) to the effect of the fire. And there are good grounds, as he has shown at some length in his report of Nov. 30, to the Home Secretary, for believing that the resistance of these two magazines did the same, and that the temperature at any time rose to what would be necessary to explode gunpowder. The thermometers in Nos. 1 and 4 magazines at the close of six and 22 hours respectively, indicated 212° and 250°. The result of the experiment was thus perfectly satisfactory, and he has felt justified in reporting accordingly to the Home Secretary.

**PEAT FUEL.**—Mr. A. C. Pelly, of Finch-lane, London



it is cut off into small pieces, which fall on to an endless chain or belt, which conveys them into one end of a cylinder (working horizontally). As this cylinder revolves the peat is rolled round, arriving at the mouth in the shape of balls; these are then taken to an inclined plane of open woodwork to dry.

**TANKERVILLE.**—The new shaft is now full size from surface to the 120 fm. level, and the mine in regular working order again to the bottom. The remainder, from the 120 to the 140, can be proceeded with without risk to the men stopping or driving, and without interruption to the dispatch of stuff through the shaft. The lode has improved in the 140 east and west since last week's report (then 24V. per fath. each), and this level will soon be into the run of the great course of ore.

**DENBIGHSHIRE CONSOLIDATED.**—This week's report may certainly be regarded with great satisfaction. The adjoining mine yielded great courses of ore, and its situation is in every respect favourable. The 60 west will soon be under the ore left in Barn shaft, whilst the operations at Parry's shaft are likely to open valuable deposits.

**WEST POLBRENN (St. Agnes).**—This young mine has kept the promise made on its behalf at the February account-day by commencing its sales of tin on Tuesday last. The tin was of first-rate quality, and as there is little doubt of sales being continued regularly, the good fortune of the mine is considered safe.

**EXPORTS OF COAL.**—By the Monthly Circular of Messrs. Higginson, of Liverpool, we learn that the quantity of coal exported in April was 1,067,152 tons, against 1,111,695 tons in the corresponding month of 1872, showing a decrease of 44,543 tons. The particulars are—From the Northern Ports, 516,851 tons; Yorkshire, 53,627 tons; London, 2729 tons; Liverpool, 46,185 tons; Severn Ports, 342,358 tons; and Scotch Ports, 105,402 tons. The increase was—Northern Ports, 211 tons; Scotch Ports, 13,843 tons. The decrease was—Yorkshire, 12,943 tons; London, 5760 tons; Liverpool, 14,143 tons; Severn Ports, 25,761 tons. Total, Jan. to April, 1873, 3,463,520 tons; ditto, 1872, 3,781,862 tons: decrease, 318,342 tons.

**MOLD-ARGOED COLLIERY.**—The directors have received the gratifying intelligence that the main coal seam has been cut in No. 1 pit, at a depth about 20 yards nearer the Stollin seam than was expected; that it is of excellent quality, and 7 ft. 6 in. thick, instead of 4 ft., as was anticipated. The Brassey seam, which will afford a large output of coal. The railway communication from the pits to the North-Western line, at Mold station, is completed, and will be opened in the course of a few days.

**DEAN FOREST—THE "SPECIAL RULE" QUESTION.**—The majority of the colliery proprietors, with their agents, representing all the principal Forest pits, met at the Lower George Inn, Newnham, on Wednesday, when, by invitation, a large number of delegates representing the colliers joined them, for the purpose of reconsidering the "Special Rules" prepared under the Regulation Act. In all the clauses having reference to managers, the Inspector insisted upon introducing the prefix "Certificated." The chief objections were made under the rules which referred to the workmen and others; the majority of which the delegates, headed by their agent, Mr. Mountjoy, objected to. In these objections, relating amongst other things to fines, the Inspector upheld the delegates, stating that the rules in question would be rejected by Mr. Bruce. All the more obnoxious masters and managers consented to have expunged, which gave great satisfaction. After prolonging the meeting several hours a new code of rules was agreed upon, and will be presented to the Home Secretary for confirmation.

**VERDICT OF MANSLAUGHTER AGAINST A DEAN FOREST COLLIERY PROPRIETOR.**—An inquest was held at the "Five Acres," near Coleford, on Thursday, before Mr. Carter, the district coroner, on the body of a youth named George Nelmes, killed by falling down the shaft of a colliery belonging to Mr. Benjamin Davis. It was shown that the machinery was of the most antiquated and barbarous description. A gin was erected at the top of the shaft, to which was attached a couple of ropes and carts, as the one descended the other ascended, communication being made to the banksman, who was frequently absent, to set in motion the machinery when required. In his absence a neighbouring quarryman discharged his functions, while at other times they were performed by passers-by. On Friday deceased gave a signal to come up, and receiving an answer from some one unknown, hitherto himself in the chains and ascended. The weight of the descending cart proving too heavy a balance, he went up with a surge, and on coming in contact with the gin was precipitated to the bottom and killed. Mr. Brough, the Inspector of Mines, described the machinery as the worst he ever saw. The jury returned a verdict of "manslaughter" against the proprietor.

**MR. E. CAVENDISH TAHOURDIN, SWORN STOCK AND SHARE BROKER, 13 AND 14, CORNHILL, E.C., 40, REGENT'S CIRCUS, PICCADILLY, W., AND SHREWSBURY, HAS FOR SALE FOR CASH OR ACCOUNT, THE FOLLOWING SHARES, and is also prepared to sell the same for delivery in three or six months, on receipt of a cover of 25 per cent. of the purchase-money, or to make advances thereon on moderate terms:**

Buyer.	Seller.	Buyer.	Seller.
Aberdare...	15s.	New Dolcoath...	2 3/4
Alt-y-Crib...	1 1/2	New Lovell...	12s. 6d.
Bog...	1 1/2	North Tankerville...	3 1/2
Boscawell Downs...	1 1/2	Old Bathol...	1 1/2
Bridgwater Creek...	2 1/2	Pennerley...	2 1/2
Brondhill...	14s.	Penstruthal...	1 1/2
Clee Hill Colliery...	12s.	Parys Mountain...	8s.
Carn Brea...	4s.	Plympton...	10s.
Cwm Elan...	4s.	Perkins Beach...	7s. 6d.
Cook's Kitchen...	13s.	Richmond Consols...	4s.
Chantelles...	3 1/2	Roman Gravel...	20s.
Cathedral...	3 1/2	Rookhope Valley...	3s.
Cedar Creek...	2 1/2	Sierra Buttes...	3 1/2
Devon Consols...	3 1/2	South Carn Brea...	3 1/2
Don Pedro...	10s.	South Consols...	6 1/2
East Faldale...	1 1/2	South Tolar...	7s.
East Van...	4 1/2	St. Just Amalgamated...	1 1/2
Emma...	5 1/2	South Roman Gravel...	37s.
East Lovell...	17s.	St. Ives Consols...	—
Eberhardt...	5 1/2	Sweetland Creek...	3 1/2
Fortescue...	10s.	Tankerville...	12s.
Flagstaff...	12 1/2	Tinroff...	5s.
Granginon...	8s.	Tylwyd...	1 1/2
Gold Run...	2 1/2	Van Consols...	6 1/2
Gawton...	2 1/2	West Basset...	7s.
Great Laxey...	16 1/2	West Tankerville...	3 1/2
Hingston Down...	6 1/2	West Wheel Lucy...	—
Hobbs Hill...	—	West Jewell...	1 1/2
Lovell...	6 1/2	West Grenville...	3 1/2
Last Chance...	5 1/2	West Carn Brea...	3s.
North Trekerby...	1 1/2	West Consols...	4s.

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**UNPRECEDENTED DISCOVERY OF TIN IN CORNWALL.**  
The proprietors of the LONDON STOCK AND SHARE AGENCY, 10, BRAND, LONDON, are gratified to find that the shares of the Cornish tin mine, which was discovered in the Wheal Mary and St. Dennis Consols Mines have been GYFALY UNDERVALUED. These mines are the two greatest prizes obtained for many years past. Those who now neglect to secure shares will greatly regret before long, as an important advance in prices is before long take place. The present prices are—Wheal Mary, 15s. and St. Dennis Consols, 25s. each.

Also recommended WHEAL TREGOES and CASTLE AN DINAS SHARES AND GOOD INVESTMENTS.

**W. J. THOMPSON, Managing Director.**

**With this week's Journal an enlarged SUPPLEMENTAL SHEET** is given, which contains—Original Correspondence: Improvements in Puddling Iron (B. Baylis); Tharsis Sulphur and Copper Company; Mining in Colorado (D. Roberts); A Fissure Vein; American Mines, and Financial Agents; Philip's Mine, Buckskin Park County, Colorado (H. B. Grose); The Herman Prize; N. Ennor's Remarks and Advice to Young Aspirants, "Plumbum Album," and Capt. Parkyn on Tin Dressing; Parkyn's "Save-All" Tin Dressing Floors; Assaying of Ores (W. White); Mines, Home and Foreign; Home Mining—A Labyrinthine View (A. Bennett); Advertised and Quoted Prices of Mining Shares; Science of Investments (R. Tredinnick); Emma Mine—"Circular Mining;" Mr. Park and the Emma; Emma Mine (J. E. Lyon); Utah Silver Mining Company; Bodmin District; Teras Mine (R. Symons); A Word of Advice, &c.—Meetings of the South Phoenix, East Wheel Seton, South Caradon, and Malabar Gold Washing Companies—South Wales Institute of Engineers and the Royal Institution of Cornwall Meetings—Casting Metals under Pressure—Foreign Mining and Metallurgy—Foreign Mines Reports—Descriptive Mineralogy—Qualitative Analysis—Electricity and Magnetism.

### The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 23, 1873.										
COPPER.					IRON.					
	£	s. d.	£	s. d.		per ton.	£	s. d.	£	s. d.
Best selected...	p. ton	96	0	0-100	0	0	Bars Welsh, in London	15	0-13	5 0
Tough cake and tile	93	0	0-99	0	0	0	Do., to arrive	13	0-13	5 0
Sheeting & sheets	101	0	0-105	0	0	0	Nail rods	13	12	6-13 5 0
Boils	100	0	0-103	0	0	0	Do., in London	14	0-15	10 0
Bottoms	103	0	0-107	0	0	0	Bars, ditto	14	10-18	10 0
Old	84	0	0-				Hoops, ditto	15	0-17	0 0
Burma Burma	91	0	0-93	0	0	0	Bars, at works	13	0-15	0 0
Wire	per lb.	0	1 1/2				Hoops, ditto	14	0-16	0 0
Tubes	0	1	10/-	1	1		Do., single & plates	20	0-20	0 0
BRASS.					STEEL.					
			per lb.	10d.-10 1/2d.			Pig No. 1, in Wales	5	10	7-0 0
Sheets			10d.-10 1/2d.				Refined metal, ditto	7	0	8-0 0
Wire			10 1/2d.-11 1/2d.				Bars, common, ditto	12	10	0-12 15 0
Tubes			11 1/2d.-11 3/4d.				Do., in London	12	0-12	15 0
Yellow metal sheeting			9d.-9 1/2d.				Do., in London	12	0-12	15 0
Sheets			9d.-9 1/2d.				Do., in London	12	0-12	15 0
			9d.-9 1/2d.				Do., in London	12	0-12	15 0
			9d.-9 1/2d.				Do., in London	12	0-12	15 0
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			9d.-9 1/2d.				Do., in London	12	0-12	15 0
			9d.-9 1/2d.							

\* At the works, 1s. to 1s. 6d. per box less.

Terne-plates 2s. per box below tin-plates of similar brand.

**REMARKS.**—The Metal Market during the past week has been marked by quietness in almost every department. It is feared that the labour question is still one which may involve a good deal of trouble, and those who are interested in metals are disposed rather to look on and watch the tide of events than to commit themselves to responsibilities which may result in consequences far other than they at the moment count upon; but although this question has continued to agitate our trade for so long, and kept business suspended from time to time, yet it is to be hoped, for the interest of all parties, that some satisfactory arrangement will soon be effected, and thus avoid for the future any cause for similar disturbances. The money market does not at present show sufficient easiness to ensure an immediate reduction in the Bank rate, and until confidence is restored, a more steady state is rather premature to expect confidence restored, and business resuming its ordinary course.

**COPPER.**—The amount of business doing is very limited, both for the home trade and exportation. The smelters are now experiencing difficulties with their millmen, and some of them have been already paid off; the terms demanded are such as the smelters are not inclined to yield to, and sooner than agree to them some of the smelters have decided upon closing their works. Should this become general it will, undoubtedly, prove most disadvantageous to mining and all copper works. Consumers will have to wait for their requirements, and in the meantime stocks of the raw material will be accumulating; therefore, with money at 6 per cent. prices are unwelcome. The market for refined metal is quiet, and the week has been irregular, but at no time particularly active. Prices of Chili bars for the most part have ranged between 84s. and 86s., according to brand and prompt; and Australian, 91s. to 94s. It is generally thought that very little copper remains in weak hands, and this would tend materially to arrest any very rapid downward movement that might, perhaps, otherwise begin to take place. Yesterday there was a heavy fall in the standard, so great a reduction at the Tickerings scarcely known before. The smelters decline buying while the men are so difficult to deal with, and the state of affairs is likely to last any length of time it will shut up the mines in Cornwall. There is another sale of ores at Swansea early in June, and it is expected the price then will be equally low.

**IRON.**—The trade in the South Wales district continues to increase satisfactorily, and most of the works are fully employed, the result being a considerable increase in the output of iron; and, although the returns are still short of what they were during the busy periods of last year, still a fair average, as compared with 1872, is maintained. The staple of this district is in rails, orders for which are coming in to such an extent that the demand is in excess of the supply. In addition to work on home account, enquiries from the Continent are numerous. Russia is among the important buyers, and orders are in course of execution for the South American market. Some difficulty is felt in getting contracts for the United States have not been given out to the extent that was expected. A considerable amount of caution is still exercised by makers in accepting orders, owing to the unsettled condition which still continues to exist with reference to the labour question. Affairs in Scotland and in the North of England markets are far from satisfactory, and this naturally has a tendency to disturb the minds of the South Wales operatives. However, the aspect of affairs, even in this matter, is somewhat improving, and it is easier now to induce makers to book orders than it has been. Clearances for foreign and home account continue to be satisfactory. Railway bars are still quoted 12s., but are to be obtained at prices somewhat under this amount. The concessions which makers have been induced to submit to have resulted in increased business. Coal, too, is somewhat easier, and a further reduction in price is looked for. This, of course, has enabled manufacturers to come to terms with buyers more readily than they could otherwise have done.

The reports from the North of England are disastrous, and the anticipations of last week have been more than realised. The ironstone miners are locked out; the masters agreed that they would not submit to an additional payment of 2d. per ton upon the output of ironstone ore, and the men decided upon only doing half the usual amount of work. This not suiting the masters they decided to draw the tubs from all the men who would not do a full day's work, which decision was made known to the men at the close of last week. It was found next day that they were determined to continue upon half-work, and the tubs were withdrawn, so that it may be considered that ironstone mining, as well as limestone quarrying, are at an end for the time being. Most of the blast-furnaces in the Cleveland district have but a very small stock of ore at the present moment, and will be compelled to stop working. Some have already prepared to stop. There are a few furnaces which are an exception to this rule, and have on hand ironstone sufficient, it is said, to keep them employed for a few weeks, but the workmen have chosen their opportunity well, for the bulk of the proprietors of the furnaces have little or no stock by them.

For some time past the make of pig-iron has not sufficed for the requirements of the finished ironworks of the district, so that the stoppage of ironstone mining is tantamount to a state of paralysis in the whole of the iron trade of the North. To meet the difficulty the men desire that an arbitration board should be appointed, as is the case in another branch of the trade. The masters refuse this demand, and are prepared to establish a committee consisting of representatives from both parties, which shall discuss questions of mutual interest. The step taken by the masters in the lock-out will throw some 6000 men out of work. This being the state of affairs, not much remains to be said regarding the condition of the market. The quotations for pig iron are a shade lower—115s. has been offered and refused for No. 3; the makers are asking 115s. to 120s., and 115s. 6d. for No. 4, and 125s. for No. 1. There is no change to note in the value of finished iron, but the demand is not active. The close of last week witnessed a great improvement in the position of the pig-iron market; and although the Bank rate was advanced to 6 per cent. on Saturday the effect has not proved prejudicial. A fair amount of business was concluded on Monday at about 117s. The tone of the market at the opening, on Tuesday, was flat, and there were ready sellers at the closing price of the previous day, but buyers were indisposed to come forward. Closing quotations showed an improvement, business being done up to 117s. 6d., but the market is devoid of much animation. The market in Glasgow has slightly fluctuated between 115s. 6d. to 117s., sellers demanding 115s. 9d. cash. The speculative transactions are now confined to very few operators, and the extent of their dealings is necessarily limited in character.

Current quotations are sustained not so much by the demand for pig iron as by the anomalous condition of the labour market. During the first four months of the year a decrease of shipments in pig-iron from the Clyde, as compared with a similar period last year, is observable of 70,000 tons, and is now upwards of 100,000 tons; the stocks of iron in Glasgow are slightly diminished, showing how small the present make is compared with that of last year. In the North of England the ironstone miners and limestone works are idle; the furnaces are being damped down, and the present aspect of affairs is unsatisfactory.

**SHIPMENTS.**

For the week ending May 18, 1873 Tons 23,560

May 19, 1873 17,493

Decrease 6,067

Total decrease since Dec. 25, 1872 107,082

**LEAD.**—There is no change of importance to report; the market

continues remarkably steady, and if anything prices tend rather in an upward direction.

**SPELTHER.**—There is very little reported in Silesian, and sellers remain at firmer rates.

**TIN.**—The market is easier, and prices of English and foreign are slightly lower. Speculators seem to have lost confidence in the article, and lower rates may follow. The stock is fully equal to the demand—in fact, the requirements for tin-plate purposes will probably show a considerable falling off, and for shipment the demand has also very much slackened.

**TIN-PLATES.**—Sales of IC coke at 34s. and 33s. 6d. in Liverpool. Makers are more anxious to book orders, and are willing to make slight concessions for immediate delivery.

**COPPER.**—Messrs. James and Shakspeare.—Nothing done in furnace material by private contract, and the labour question is still giving trouble to the smelters. In bars we have traced sales for the past seven days of about 2700 tons, a good portion of which were not reported in the open market, and the parcels sold at the lowest figures were disposed of, on special conditions or without selling paying brokerage. The transactions comprise 1350 tons of bars, for cash from 84s. 10s. to 85s. 10s. per ton; 1850 Urmeneta and good ordinary brands, 85s. to 84s. cash, 86s. 10s. to 84s. 10s., with various prompts, ranging between three months and three weeks; 475 picked and best brands at 87s. down to 85s. 10s. cash terms; and it should be noted that the lowest figures were accepted when coupled with the above mentioned terms, or else for immediate cash—often, in fact, with both conditions combined. There are buyers at the lowest rates in our list, while sellers ask the quotations. With respect to the sales and values of Australian, the same remarks will apply; the quantities disposed of were, 100 tons of bars, 92s. 10s. cash, and 90s. with six weeks prompt; 700 tons of Wallaroo, form 92s. 10s. down to 91s. 5s. cash, and three months prompt; and 150 tons, 93s. 10s. and 94s. with two months prompt. English sorts are dull, but, owing to fears of a strike amongst their workpeople, smelters are restricting their engagements, and, therefore, maintain the full official quotations.

**TIN.**—English continues dull, and values have again receded. For most parcels of Straits there has been a fair enquiry, at figures, however, which most holders were unwilling to accept, and the business actually carried through has consequently been limited. During the last day or two efforts were made by "bear" operators to depress the market, without, however, having much appreciable effect upon prices. The sales amount to 135 tons, at 134s. 6d. to 136s. per cwt., cash terms; and 10 tons, at 133s. 6d. per cwt. for delivery during June next, having the option of delivering 50 tons. Of Banca, 10 tons were reported at 82s. per cwt., cash terms; and in Holland a large business took place at 80s. to 81s. Of the 46 tons of Australian ore, sold by tender on the 28th inst., 18 tons inferior and common realised 32s. 10s. to 36s. 2s. 6d. per ton; 28 tons good and fine, 93s. 10s. to 92s. per ton. Commencing with June next it has been decided that these sales shall take place on the first and third Tuesday in the month, and that sampling shall take place at least eight days prior to the day of sale. The next ticketing is fixed for the 31st proximo.

**Messrs. Vivian, Younger and Bond.**—There has been a larger business transacted in foreign descriptions this week than last, and with the exception of some parcels that have been sold under current rates for immediate cash, the annexed quotations have ruled steadily throughout. In Chili Bars a considerable quantity has changed hands at 84s. to 85s., part prompt cash, of good ordinary brands. Lots sold at 83s. 10s. to 84s. 10s., and picked brands 86s. to 87s. In Australia, sales of Wallaroo and Banca at 92s. 10s. to 94s. per ton, and 91s. 5s. to 92s. 10s. ordinary terms, with 92s. 10s. to 94s. paid for extra prompts. English unmanufactured has sold from second hands at 92s. for tough. Quotations for unmanufactured are unsettled, awaiting a solution of the wages question with the workmen.

The MINING SHARE MARKET has been particularly quiet this week, and there seems to be very little disposition on the part of the public either to invest or to speculate at the present moment. Prices, therefore, are for the most part nominal, although the effect of the alarming, but it is hoped only temporary, fall in the copper standard at the Truro Ticketing on Thursday has not had time to be felt. A decline of 11s. in the standard at one sale is unprecedented in the history of the copper trade, and its effect (for the price is now but 10s. 7 1/2d. per unit, or less than it has been for the last half-century) upon the whole copper mining industry will be indeed disastrous. Considering the present price of fuel and labour, the fall will deprive the best dividend-paying mines of Cornwall and Devon of the whole of their profits, and in the case of mines which have been only meeting cost no other course will be open than to abandon them as speedily as possible, or determine to pay heavy calls. No complaint can be raised against the smelters, for they have already raised the wages of their men 35 per cent. in the year, and, therefore, further advances are unreasonable; so that we can only hope that the men will see their folly in time to avert so great a calamity as the ruin of all our copper mines, by making the working of them so unremunerative that the shares will be absolutely valueless. The mines mostly in favour during the week have been Wheal Crebor, South Roman Gravel, New Rosewarne, Lamas Gravel, South Carn Brea, Van Consols, Great Laxey, Hingston Down, Cook's Kitchen, Old Treburgett preference shares, Parys Mountain, &c.

South Caradon, 190 to 195; at the meeting, on Tuesday, a dividend of 4s. per share was declared. The profit on the quarter was 2049s., and the mine looking well. South Crofty, 51 to 53; the accounts at the meeting showed a profit on the quarter's working of 1001s., and a debit balance of 500s. Had tin kept at the old price this balance would have been cleared off, and when the dressing-floors are complete the costs will be reduced, and the returns increased. Box, 1 1/2 to 2s.; Carn Brea, 122s. to 127s.; Cook's Kitchen shares have been firmer, and leave off 19 to 20s.; the accounts at the meeting were drawn up to March 15, and the tin credited (74 tons 11 cwt.) brought 5758s. 9s. 1d. The merchants' bills for four months, which include 1259s



Wheal Margaret, 4½ to 5½; West Seton, 40 to 45; Wheal Uny, 3½ to 4½; St. Agnes Consols, 4½ to 4¾. The 140 levels east and west have improved since last report (their worth 240t. per fathom each), and this level will soon be into the run of the great course of ore. The new shaft is now full size to the 120, and the remainder to the 140 can be proceeded with without risk to the men stopping or driving, and without interruption to the hauling of stuff through the shaft. West Esgrail, 3 to 3½. West Wheal Gorland, 3½ to 3¾. Green Harth, 5 to 6; the directors have declared a dividend of 2s. per share, and the mine is said to be richer than ever, coming into a splendid position, with a very small outlay. North Hendie has paid a dividend of 2s. 6d. per share.

Buttallack quarterly meeting was held on Wednesday, and the accounts showed a slight profit, the debit balance being reduced from 647 to 556t. Coals for the quarter cost 500t. more than in the corresponding quarter of 1872, and the tin realised 8t. 2s. 6d. per ton less. The mine is, however, in a better position than 12 months since.

In Foreign Mines the transactions have been limited. Eberhardt and Aurora, 5½ to 6½; Emma, 5½ to 5½; Flagstaff, 12½ to 13; General Brazilian, 4 to 5; Thornhill Reef, 35s. to 40s.; New Queensland, 4½ to 4¾; Sweetland Creek, 4 to 4½.

The Last Chance Silver Mining Company of Utah (Limited) fifth monthly dividend of 2s. per share will be paid on and after the 31st inst.

The Chicago Silver Mining Company has declared a monthly dividend of 4s. per share (at the rate of 24 per cent. per annum).

We are informed that Mr. Joseph Nelstrop, of Ackworth Lodge, near Pontefract, has joined the board of the London and Yorkshire Bank. Mr. Nelstrop is, we believe, a director of the well-known firm of Joseph Rogers and Sons (Limited), Sheffield.

Mr. Henry Spain, of Gresham-buildings, has been appointed official liquidator of the Tamar, Kit Hill, and Callington Railway Company.

It is stated that a very large South Wales Colliery undertaking will be introduced under influential auspices in the course of a day or two.

The New Ordinary Stock of the Grand Trunk Railway of Canada 1½ to 2 prem.

The traffic returns of the Galveston, Harrisburg, and San Antonio Railway for the third week in April amounted to \$5425, against \$4775 for the corresponding week of 1872, being an increase of \$650.

The shares of the Llanberis Copper Mining Company are ½ to ¾ prem. The shares of the Azoff Coal Company are ½ prem. The First Mortgage Bonds of the New York, Boston, and Montreal Railway Company are ½ dis.

Atlantic and Great Western Railroad Leased Lines Rental Trust ½ to ¾ prem. The New Issue, ½ to 1 prem. Atlantic and Great Western Third Mortgage, 3½ to 3¾; Preference Stock, 12 to 13; and the Common Stock, 11 to 12. United States Rolling Stock is 23 to 23½, and the New 2½ to 3 prem.

Eric Consolidated Seven per Cent. Bonds are 94½ to 94¾ ex coupon. The Convertible Bonds of the Erie Railway Company are 80½ to 81½. Bischoffsheim's Certificates for Erie shares are 49 to 49½.

The Market for Mine Shares on the Stock Exchange during the week has shown rather more activity; the leading mines, both home and foreign, have been fairly dealt in, and the market closes with a decidedly firmer tone.

The Metal Market closes steadier, no important alteration having occurred during the week. A better demand is anticipated with more encouraging advices from continental markets. In copper a larger business has been transacted during the week, and quotations have remained steady. Tin closers easier, and in moderate demand.

Silver is firmly held, and lead also remains firm, at quotations, which have slightly advanced.

Flagstaff shares have advanced to 12½, 13½; the warrants for the 18th monthly dividend, at the rate of 30 per cent. per annum will be sent out on May 31; this makes a return of 108,000t. (or more than one-third of the capital) paid to the shareholders in the shape of dividends in 15 months. Capt. Forbes, R.N., states that after a careful inspection of the mine he is glad to be able to report that at a depth of 650 ft. from the collar of Discovery Shaft the angle vein continues to look well; the various levels are looking as well as last reported, the only exception being the 140 ft. level, below lowest adit east (which is near the surface and unimportant), where a poor part of ground had been met with, but in the same level, west of shaft, that is, running into the mountain, and, therefore, most important, a fine run of ore ground had also been met with where they had lately cross-cut the lode near the end, and were then 12 feet through it, and had not then reached both of the walls.

Mr. Maxwell says this is the largest deposit he has seen as yet, and believes it will be productive of considerable riches. Captain Forbes has no doubt that 12,000 to 15,000 tons of ore can be got down to the smelting works before the winter sets in, and that instructions have been given to that effect, and that he will see it done; the minimum value of this amount of ore represents a net value of something like 150,000t. Arrangements have been made as regards means, and hauling to the mine will average 100 tons daily. Capt. Forbes confirms his statement that the mine will permanently pay present dividends and create a reserve fund, and pays a just tribute to the energy and integrity of Mr. Maxwell.

Last Chance, 6½ to 6¾; the warrants for the fifth interim dividend, at the rate of 24 per cent. per annum, go out on May 31; the mine is coming forward as a rival to its neighbour, Flagstaff. Tecoma, 6½ to 10½; private advices show that the developments in depth continue to open out large bodies of ore of considerable richness; some assays give as high as \$1000 per ton; the furnaces will commence turning out bullion next week.

Emma shares have again fluctuated between 5t. and 6t., and close 5½ to 5¾; an extraordinary general meeting has been convened for Thursday for the purpose of recommending to the directors the names of duly qualified shareholders to be appointed to seats at the board in place of Mr. Orr-Ewing, Mr. Henderson, and Sir H. S. Robertson, who have resigned. It will be recollected that Mr. Orr-Ewing and Mr. Henderson, as the representatives of the Scotch shareholders, were nominated to seats at the board by the shareholders at the meeting in March, therefore surprise is expressed at the announcement now made. The shareholders will also be asked to concur in the directors exercising their borrowing powers.

The Chicago Silver Mining Company has declared a monthly dividend of 4s. per share (at the rate of 24 per cent. per annum), payable on and after June 3.

Utah, 4 to 5; a telegram received this week announces the discovery of a fresh shoot of ore, as well as reporting that the old workings on Red Warrior are looking well; the works were only recommenced the last week of April. Camp Floyd, 1 to 1½; the mill was to start up at the end of April, and advices are daily expected giving particulars of the result.

Richmond shares have advanced to 4½, 4¾; the last week's run amounts to \$28,000, and a cablegram announces that the lawsuit has been commenced "with good promise." Eberhardt and Aurora, 5 to 6½; South Aurora, 2 to 1½. Pacific, 2 to 3; this mine still slowly progressing, and Mr. Pringle is meeting all expense by the milling of the ore raised.

The shares in the gold-washing companies have met with fair attention, and many purchases for investment are noted, and close firm at quotations. The statutory meeting of the Malabar Company was held on Tuesday, and the details appear in another column.

Sweetland Creek, 3½ to 4; the agent, Mr. G. D. McLean, reports that he is completing the necessary arrangements, and will make the next run through the new tunnel. Birdseye Creek, 2½ to 2¾; Mr. Powers writes that his trial upon the Walouba ground has been satisfactory, and that he looks forward to having a good piece of ground here. Cedar Creek, 2½ to 2¾; the mines are progressing in a satisfactory manner. The superintendent, Mr. Ludlum, is pushing on matters with all speed. Malpas, 1½ to 2; Rica, 2 to 3.

Brazilian descriptions have received more attention. St. John del Rey (stock), 140 to 150; Don Pedro, ½ dis. to ½ prem.; the produce for March was 611 ozs., of the value of 2252t., against a cost of 2381t., showing a loss of 1128t. Rossa Grande, ½ to ¾; ditto (18s. paid), ½ to ¾; the cost for the month amounts to 888t. The prospects of the mines are reported as continuing to be very good. It is estimated that during February 560 tons of mineral were laid open in backs in the Babu Mine, and 190 tons of mineral were stocked, and in Cachoeira 168 tons. General Brazilian, 2 to 4; Capt. Treloar hopes to be able to report before the end of May that several shoots of gold have been reached, both at Santa Anna and Tabira.

Van, 33 to 40; the lode in the 60 west still continues to open out

in a rich course of ore, being worth 9 tons per cubic fathom; the 45 west also continues its previously quoted value; the mine, altogether, shows richer than at any former time. East Van, 4 to 4½; Van Consols, 6½ to 6¾. Tankerville, 11½ to 12½; the 140 has improved both east and west since last report, and the agent expects very soon to have these ends extended into the run of the great course of ore. West Tankerville, 4 to 4½; Roman Gravels, 19½ to 20½; Ladywell, 2½ to 3; a satisfactory report appears in another column. Pennerley, 2½ to 2¾; there is no alteration, Porter's pit looking, if anything, a shade better. Bog, 1½ to 2; the agents report having examined the 148 fm. level for 64 fms. westward, finding a good course of ore, which will be let out on tribute at the next setting.

Cape Copper, 26 to 28; the report of the engineer on the railway and jetty for 1872 appears in another column; it states that 4186 tons of fuel, material, and goods were carried up, and 9028 tons of ore, regulus, and metal brought down; the surveys for the extension of the railway to Ookiep have been commenced, with a view to obtain the necessary powers in the ensuing parliamentary session in Cape Town. South Caradon, 175 to 185; at the meeting on Tuesday the accounts showed a profit for the quarter of 2049t.; a dividend of 4t. per share was declared, absorbing 2048t.; the balance carried forward was 3174t. The mine is reported as continuing very productive. New Quebrada shares, after declining to 4, 4½, close somewhat firmer. Panulcillo, 3½ to 4.

East Lovell, 17½ to 18; the mine is looking quite as well as reported last week, the main lode being worth 280t. per fathom, and the lode in the new part from 70t. to 80t. per fathom.

Subjoined are the closing quotations:—Bog, 1½ to 2; Carn Brea, 125 to 127; Devon Great Consols, 6 to 7; East Caradon, 3 to 3½; East Wheal Lovell, 17 to 18; East Van, 4½ to 4¾; Great Laxey, 16½ to 17½; Great Wheal Vor, 6½ to 7; Hingston Down, 7 to 7½; Marke Valley, 2½ to 3; Pennerley, 2½ to 2¾; Parys Mountain, ½ to ¾; Roman Gravels, 19½ to 20½; South Caradon, 175 to 185; Tankerville, 11½ to 12½; Tincroft, 50 to 52; Van, 38 to 40; Van Consols, 6½ to 6¾; West Caradon, 26 to 28; West Chilverton, 11 to 11½; West Tankerville, 4 to 4½; Wheal Crebor, 5½ to 6; Almada and Tinto, 15s. to 20s.; Anglo-Argentine, ½ to ¾; ditto 15 per cent. pref., ¾ to ¾; Birdseye Creek, 2½ to 2¾; Camp Floyd, 1 to 1½; Cedar Creek, 2½ to 2¾; Chonates, ½ to 1; Colorado Terrible, 1½ to 2; Don Pedro, ½ dis. to ½ prem.; Eberhardt and Aurora, 5 to 6½; Emma, 5½ to 5½; Flagstaff, 12½ to 13½; Gold Run, ¾ to ¾; New Quebrada, 4½ to 4¾; North Treleigh Wood, 1 to 1½; West Esgrail, 3½ to 3¾; Pacific, 2 to 3; Port Phillip, 1 to 1½; Richmond Consolidated, 4½ to 4¾; Rica, 2 to 3; San Pedro, 3½ to 4; Sierra Buttes, 3½ to 3¾; St. John del Rey, 150 to 160; Sweetland Creek, 3½ to 4; Tecoma, 9½ to 10½; Utah, 4 to 5; United Mexican, 2½ to 2¾; Malpas, 1½ to 2.

At the Truro Ticketing, on Thursday, 3486 tons of copper ore were sold, realising 11,391t. 11s. 6d. The particulars of the sale were—Average standard, 97t. 8s.; average produce, 6½; average price per ton, 3t. 5s. 6d.; quantity of fine copper, 215 tons 7 cwt. The following are the particulars of the sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
April 17.	119	13	0	13s. 6d.	13s. 6d.	267 11 0
May 1.	1320	102	9	0	11 0	12 9½
May 22.	3486	97	8	0	6½	3 5 6

Compared with the last sale, the decline has been in the standard 11t., and in the price per ton of ore about 13s. 6d. The cause of this alarming decline—the exactions of the workmen at the copper works—is referred to in the letter of our Cornish Correspondent, in another column.

At Swansea Ticketing, on May 13, 3032 tons of copper ore were sold, realising 45,054t. 14s. 6d. The particulars of the sale were—Average standard for 9 per cent. produce, 99t. 14s.; average produce, 19; average price per ton, 14t. 17s. 2d.; quantity of fine copper, 576 tons 2 cwt. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
April 28.	1105	108	14	0	15s. 2d.	285 15 0
May 13.	3032	99	14	0	14 17 2	15 7½

Compared with the last sale, the decline has been in the standard 7t., and in the price per ton of ore about 1t. 6s. On June 3 there will be sold 1019 tons from Knockmahon, Berehaven, Fursdon, Concordia, Cappagh, and elsewhere.

The CARDIFF AND SWANSEA SMOKELESS STEAM COAL COMPANY, with a capital of 400,000t., in shares of 10t. each, has been formed to purchase and develop the Pentre and Church Collieries in the Rhondda Valley, on the Taff Vale Railway, and 21 miles from Cardiff, and the Resolven Collieries in the Neath Valley, on the Great Western Railway, 8 miles from Britonferry, and 13 miles from Swansea, with all buildings, workmen's cottages, engines, boilers, weighing houses, machinery, horses, railway sidings, and all other plant, has been agreed upon for the sum of 285,000t.; and the vendors, as a proof of their confidence in the value of the property, have agreed to receive the purchase money—135,260t.—in full-up shares, and the balance of 151,740t. in debentures carrying 6 per cent. interest, and extending over periods of three, four, and five years. The combined properties constitute one of the largest and richest coal fields in South Wales, and comprise an area of over 4700 acres, held for unexpired terms of 42, 43, and 98 years, at moderate rents merging into exceptionally low royalties. An important feature in connection with the working of the above seams is the total absence of water, whereby the outlay and expense of pumping are avoided; and the roof also in both collieries is so thoroughly good as to effect a material saving in the usual cost of timbering, &c. During the four months ending April the output averaged 550 tons per day, which at present selling prices would have yielded 70,000t. per annum profit. The further development of these important properties will include the completion of the large double-banded shaft now in course of sinking at Pentre; the sinking of two pairs of pits to the lower measures, and the opening out, on a more extended scale, of the upper workings at Resolven, the extension of siding accommodation, and the erection of a number of additional workmen's cottages. For all these purposes it is estimated that an outlay of 90,000t. will be required. The direction is an influential one, and several members of the board have the advantage of long practical connection with the coal trade, and have supervised for a large number of years the operations of the mines. Messrs. Cory will continue the sale and shipment of the coal on moderate commission—an enormous advantage to the company. The prospectus will be found in another column.

With a view to carry out the plan of re-organisation sanctioned by the shareholders, by which the railway will be put in a position to develop the traffic existing on the line, and to bring the undertaking into first-class working order, the GRAND TRUNK RAILWAY OF CANADA issue 7,500,000t. stock, part of 10,000,000t. stock authorised by the shareholders and by Special Act passed May 3. The price of issue is 22t. 10s. per 100t. stock, and the proceeds will suffice to defray cost of conversion of gauge and other improvements of line up to Dec. 31, 1874. The remaining 2,500,000t. will not be issued before Jan. 1, 1875; by which time it is believed a higher price can be demanded. The present issue ranks with the ordinary stock, and 3 per cent. on the stock would give 13½ on the investment; 5 per cent. giving 22 per cent. A competent authority writing upon the subject states that the improvements which must take place upon the road will have a beneficial effect upon all the securities of the company, and that any of them bought in the dark—as one might say—must yield a large profit to the buyer, apart from producing him a good return in the shape of dividends. With regard to the prospective value of the stock now to be issued it can be to some extent arrived at by estimating the probable progress of the line. It requires only three years of the present normal rate of increase of traffic, combined with a reasonable reduction of the present highly exaggerated working charges, to convert the Grand Trunk unpaying ordinary into a dividend-paying stock. A continuance of the increase for a period of five years will give 3 per cent. interest upon the ordinary stock, including the new issue, which will be sufficient for all capital purposes until dividend is earned. In making the allotment 5,500,000t. stock is appropriated rateably to the holders of the existing ordinary and preference stocks registered in the books of the company on May 23, 1873, in the proportion of 50t. new stock for each 100t. stock held by them. Stockholders desiring to subscribe for a larger amount of stock than their *pro rata* allotment, will receive a priority in the appropriation of any balance not taken by the original allottees. The remaining 2,000,000t. stock, with the balance (if any) not taken up by the proprietors, will be allotted among applicants who are bondholders not registered in the books of the company, and to the public. The prospectus will be found in another column.

The WHEAL MARY TIN MINING COMPANY have given notice that the list of subscriptions for the 2000 shares (the remainder of the company's capital, which consists of 50,000t., in shares of 5t. each, having been privately subscribed for by 66 shareholders) recently offered to the public will be closed on Monday. A produce of 80 lbs. of tin to the ton of stuff is considered ample to permit of profitable working, and it is observed that this mine has a rich vein of tin discovered in a clay-pit known as the Pixey lode, and which produced from assay 100 lbs. of tin to the ton of stuff, and which the prospectus states is now producing 112 lbs. per ton—the average quantity of tin to be worked being about 10 lbs. to the ton. Altogether five lodes have been discovered, and since the prospectus was issued the lode has been cut in the engine-shaft worth 200t. per fathom. The shares now offered to the public are issued to raise capital for increasing the machinery now in course of erection, there being a large quantity of ore already at grass which will be available to provide profits as soon as the stamping machinery is completed. Every confidence is felt in the success of the undertaking. The prospectus will be found in another column.

## ZINC AND LEAD ORES.

I BUY at the HIGHEST PRICES.—LEAD ORES.—LEAD-SILVER ORES.—SILVER-LEAD ORES. ZINC AND LEAD ORES MIXED TOGETHER. SILVER-LEAD, BULLION, HARD LEAD, &c. SULPHATE OF LEAD, ASHES, SLAGS, &c. Particulars by letter.

ARMAND FALLIZE, Ingénieur, à Liège (Belgium).

Mr. JOHN HENRY POOLE,  
MINERAL AGENT,  
BILBAO (SPAIN).

RHENISH DYNAMITE WORKS,  
OPLADEN (RHENISH PRUSSIA).  
SUPERIOR QUALITY. CHEAP PRICES.

CAPPER PASS AND SON, BRISTOL,

ARE PURCHASERS OF  
ANTIMONIAL LEAD, HARD LEAD, LEAD MATTE, LEAD SLAGS, SULPHATE OF LEAD, LEAD ASHES, COPPER SLAGS, COPPER REGULUS, TIN ASHES, ZINC ASHES, SPUETTER DROSS, HARD SPUETTER AND MIXED METALS, DROSS OR REFUSE containing COPPER, LEAD, TIN, or ANTIMONY.

## COAL-CUTTING MACHINERY.

W. AND S. FIRTH undertake to Cut, economically, the hardest CANNEL, ANTHRACITE, SHALE, OR ORDINARY COAL, ANY DEPTH, UP TO FIVE FEET.

Apply—16, YORK PLACE, LEEDS.

WANTED, a GOOD BLACKSMITH, for the GRASSINGTON LEAD MINES, near SKIPTON, YORKSHIRE; also, a GOOD CARPENTER, for the BURLINGTON SLATE WORKS, near ULVERSTONE, LANCASHIRE.—Apply, with testimonials as to character and ability, and stating the amount of wages required, to Mr. EDVY, SKEPTON.

WANTED, COUNTRY AGENCIES.—A CITY FIRM IS OPEN TO TRANSACT, as Agents in London, the BUSINESS OF FIRST-CLASS MANUFACTURING FIRMS in the COUNTRY in connection with the STEEL, IRON, and METAL TRADES, &c. Address, "Iron," at Mr. Barnard Morris, Advertising Agent, 43, Ludgate-hill, London, E.C.

WANTED, a SECONDHAND 50-in. cylinder PUMPING ENGINE, with 10-ton BOILER, and fittings, complete. The whole must be in thorough good condition. Address, with full particulars, stating lowest price, to Mr. JAMES HICKEY, 22, Austinfriars, London, E.C.

TO INVESTORS.—An EXCELLENT OPPORTUNITY presents itself to ACQUIRE some FULLY PAID-UP SHARES in an ESTABLISHED COMPANY, the holder being compelled to sell at once. Address, "J. D.," Messrs. Gosden and Son, 1, Cross-court, Bow-street, W.C.

INVESTORS SEEKING A SOUND INVESTMENT.—THE ADVERTISER, requiring money to meet certain calls, is DESIROUS of DISPOSING of some FULLY PAID-UP SHARES in a FIRST-CLASS ESTABLISHED MANUFACTURING COMPANY. Address, by letter, "Z.," Messrs. Gosden and Son, 1, Cross-court, Bow-street, W.C.

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A GENTLEMAN REQUIRES CO-OPERATION in FORMING a COMPANY to PURCHASE and WORK a VALUABLE SILVER-LEAD MINE, or a PART would be SOLD, and the mine worked privately. Address, "X. Y.," H. Born, 115, London Wall, London, E.C.

MINING ENGINEER AND MINERAL ESTATE AGENT, with many years' experience in the letting and management of mineral properties, and a thorough practical knowledge of geology, as applied to Mining, REQUIRES AN APPOINTMENT. Address, "M.E.," care of Mr. Charles Walter, Bell-yard, Temple Bar, London.

A GENTLEMAN desires a RE-ENGAGEMENT as MANAGER. Understands the ERECTION of SULPHURIC, SALT-CAKE, and BLEACHING POWDER PLANT, also the MANIPULATION of the respective departments. Has experience in the valuation of Silver and Lead Ores. Address, "G. X.," 8, Wellington-road, Dublin.

A FIRST-RATE GOING COLLIERY FOR SALE.—Output from 500 to 800 tons per day, and returns can be greatly increased. Cost of raising, &c., about 9s. per ton; selling price from 18s. to 22s. per ton. Apply, by letter, to Mr. A. BENNETT, Coal Agent, The Lombard Exchange, London.

FRANK MILLS MINING SHARES.—WANTED, TWENTY or THIRTY, at lowest price. Apply to Mr. J. POSTER, Newton Abbot, Devon.

PHENIX (SILVER-LEAD) MINING COMPANY.—WANTED, an OFFER for FIFTEEN SHARES. All calls—viz., £t 10s. per share—fully paid. Address, Mr. BIGGELL, Wheaton Aston, Penkridge, Stafford.

FOR SALE, STEAM WINCH, with two cylinders, 7 in. bore, by 1 ft. stroke, fitted with link motion; multibular BOILER, furnished with Giffard's Injector, and gun-metal feed-pump, &c. The above are nearly new, have never worked, and are a first-class job. Will be sold cheap. May be seen at Botchergate Foundry, Carlisle. Apply to Messrs. HIND, Botchergate Foundry; or to W. B. JEFFREY, Tan-y-Bwch Mine, Pwllheli.

FOR SALE, ONE 80 in. and ONE 70 in. cylinder PUMPING ENGINE, with BOILERS, &c., complete. The above are equal to new, and offer a favourable opportunity to parties requiring engines of these sizes. Apply, J. C. LAXTON and SON, Redruth, Cornwall.

FOR SALE, a GOOD SECOND-HAND 60 in. cylinder PUMPING ENGINE, in good condition, 10 ft. stroke in cylinder and 5 ft. in shaft. Price, &c., on application to FRANCIS DINGY, Truro Foundry, Truro, Cornwall.

FOR SALE, a FIRST-CLASS SECONDHAND CRUSHING MILL, Rolls, 27 in. diameter. Has been thoroughly refitted and repaired, and is now equal to new. Price, delivered to carrier, £75. Apply to GEORGE GREEN, Engineer, Aberystwyth.

JAMES BRENCHLEY, SHAREDEALER, 32, NICHOLAS LANE, LOMBARD STREET, LONDON, E.C. (Established in 1854.)

Sales and Purchases effected in every description of marketable securities. British and Foreign Mines at net market prices. Mr. B. holds himself personally responsible to the Buyer or Seller for the fulfilment of all engagements. FOR SALE:—20 Marke Valley, £2 13s. 6d.; 20 Devon Consols—each nett.

MESSRS. T. BENNETT AND CO., SHAREDEALERS, CLAREMONT STREET, SHREWSBURY, have FOR SALE the FOLLOWING SHARES at prices affixed:—

BRITISH.		
30 Bog, 37s. 6d.	30 Old Batholes, 25s.	20 West Tankerville, £4
100 Cwm Eian, 5s.	65 Perkins Beach, 10s.	6 Tankerville, £12½
20 East Van, £4½	20 Pennerley, £2 6s. 3d.	5 Van, £39.
25 North Tankerville, 17s.	40 South Roman, 39s.	10 Roman Grav., £20½
	25 Van Consols, £6½	
FOREIGN.		
40 Emma, £25½	10 Gold Run, 9s.	25 Sweetland, £4.
50 Flagstaff, £12½	30 Richmond, £4½	

SPECIAL BUSINESS in the mines of the Shropshire District, especially Roman Gravels, Ladywell, and Tankerville, the shares of which are strongly recommended. Will buy Tyllwyd at £1¼, or sell at £1½. Every description of stock and share dealt in. Advances on marketable shares.

MR. WILLIAM WARD (Late WARD and LITTLEWOOD), CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C., DEALS in ALL KINDS of STOCKS and SHARES, for cash or the account.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C. Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for May, now ready, post free, price 6d.

MESSRS. VALENTINE & CO., 17 and 18, CORNHILL, E.C., BANKERS, BROKERS, AND FINANCIAL AGENTS. Sales of Stocks and Shares, by Public Auction, every Tuesday, at the Mart, Tokenhouse-yard, E.C.

MR. J. S. MERRY, ASSAYER AND ANALYTICAL CHEMIST, SWANSEA.

MR. R. PERCY ROBERTS, FINANCIAL AGENT, 40, ENGLISH STREET, CARLISLE.



## Notices to Correspondents.

\*. Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

MARBLE.—Perhaps you will allow me to draw the attention of your readers to the shares of this company, which appear to be quite overlooked. The dividend last year was above 10 per cent., and much more is expected this year, a landslip having kept down the output last year. Such accidents have now been provided against, so that the output must increase considerably, and, as the capital is now much reduced by the forfeiture of the vendors' shares to the company, the price should be 50 per cent. premium, instead of 50 per cent. discount. The reason for the depression is said to be the unsettled state of Spain, but this cannot really affect the company in any way—therefore, investors have a rare opportunity of laying in a cheap stock of shares, as they must rise considerably before long, the property of the company being of undoubted value.—SCRUTATOR.

TIN-PLATES.—"T. P." (Cambridge).—The quotations given each week are those ruling at the time in the market. We can only account for your being unable to purchase at that price by supposing that you buy small quantities only, or that you demand deductions as discount for cash, &c., which our prices do not allow for.

DENBIGHSHIRE AND FLINTSHIRE MINES.—"J. E. T." (Hay).—There is no book or pamphlet, at least of recent date, bearing upon the lead, &c., mines of Denbighshire and Flintshire. Application should be made to the secretaries of some of the mines in the district, who would doubtless give the required information.

COMPRESSED AIR.—"J. S." (St. Columb).—We are not aware that there is any work specially treating of the use and nature of fans as worked in flues, chimneys, &c., in connection with furnaces and kilns, but probably some correspondent will forward the name of the book should any such exist.

LLANARMON MINES (North Wales).—Can any reader throw a little light on the above mines? Some twelve months ago they were represented to be one of the great prizes of the year by those who advise how to invest, and what to invest in. I may have scanned your columns in vain; but no report, if my memory does not fail me, has been published for a long time.—SUBSCRIBER: 16, Bromsgrove-road, Sheffield, May 19.

IMPROVED WATER PURIFIER.—"D. B. and Co." (Cliverston).—The composition for the purification of water and prevention of boiler explosions to which reference is made is the invention of Messrs. Callender and Munro, of 75, Greendyke-street, Glasgow. The advertisement stating terms upon which it is supplied will be found in the Journal of April 19, and the invention was fully noticed that date.

HERMAN'S PRIZE ESSAY.—"C. W."—See an article on this subject in today's Journal. Received.—"F. A. C."—(Cape Breton).—"R. G."—(Leeds).—"J. H. C."—(T. L.).—"H. C."—(Lex).—"Write to a broker."—"R. S. F."—"Shareholder."—James White (San Francisco).

## THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MAY 24, 1873.

## THE NORTHERN IRON TRADE.

Consequent upon the continued restriction of the supply of ironstone the mineowners of Cleveland have locked out some 7000 of their men. Timely notice of this intention was communicated to the miners a fortnight ago, but they disregarded the warning, and continued their old tactics, until on Saturday last the employers carried their threat into effect by withholding the tubs and closing the mines. The immediate effects of this action will be the locking-out of 7000 men and the complete stoppage of the supplies of ironstone; but the ultimate effects will be much more serious, as they will involve the prostration of the entire iron trade of the North of England. The great majority of the works have positively no stock on hand, nor have they had for many months. There are, however, one or two exceptions to this rule. The Consett Iron Company, for instance, will be able to carry on operations for at least three months without any additional supplies of Cleveland stone, and Messrs. W. Whitwell and Company, of South Stockton, are likewise in a position to keep their blast-furnaces going for a considerable time. Both these firms make use of a large admixture of hematite ores, the supplies of which will not be interfered with. The works of the Weardale Iron and Coal Company, at Tadhoe and Towlaw, are to a large extent independent of the Cleveland mines, the bulk of the ore smelted in their furnaces being the "rider," or spathose, ore of Weardale; and the Norwegian Titanic Iron Company, who carry on the smelting of the titaniferous ores of Norway at their Norton works, are not likely to be at all affected by the present struggle. But with these few exceptions, representing not more than a dozen blast-furnaces out of 140 built in the North of England, all the pig-iron works are likely to be stopped within a fortnight if the struggle continues for that length of time.

Arrangements have already been made by all the principal firms for damping down, and it is also almost supererogatory to inform practical men that when a blast-furnace is once damped down it matters little, so far as trouble and cost is concerned, whether it remains so for a week or a month. This renders it all the less likely that the ironmasters and mineowners, after having taken up such a decided stand, will easily abandon their position. The proceedings of the miners at the various meetings they have held during the week have left little reason to hope that they mean to be less firm. The situation, therefore, is one of the most serious kind, and a sadder or more gloomy prospect never opened up before the staple industry of Cleveland.

Before going more particularly into the results of the lock-out, it will be well to glance briefly at its causes. In March last the Miners' Union issued a circular demanding an advance of 2d. per ton, and a corresponding advance on day labour. Ironstone mining in Cleveland is a thing *sui generis*. It usually takes two men to get stone—the miner and the filler. The former is the skilled workman, and employs the latter, whose wages he also pays. Besides these two classes of mine operatives there are a great many off-handed, or "dotal" hands, who are either paid by the day or by the week. The wages of the miner are determined by his output. Until within the last 18 months his allowance was only 10d. per ton; but the formation of the Union in January of last year, and the continued briskness of trade, led to his earnings being improved once and again, until in August they were equal to 1s. 4d. per ton. At this figure they remained until the application for an additional 2d. per ton was made, in March of this year. In the circular which bore this request the Union executive suggested that the mineowners should form an association, and appoint a joint committee of their number to discuss with the Union committee all questions affecting their mutual relations. The reply of the mineowners, dated March 18, set forth that it was impossible to grant the advance demanded, but that the suggestion as to the formation of a joint committee had been put in force; and it was therefore competent for this or any question arising out of their reciprocal relations to be discussed by the joint committee with a view to a peaceful settlement. A meeting was, therefore, appointed between the delegates of the Union and the joint committee of the masters, but as the masters simply repeated their answer that it was impossible in the present state of their contracts to allow any further advance, no decision was arrived at. Since then the miners have systematically and avowedly restricted their output—sending out 2 tons a-day, or even less, instead of 5 or 6—with the result already stated.

Much stress has been laid upon the refusal of the masters to submit the case to arbitration. Their refusal has been used as an argument against the mineowners by those who do not comprehend the exact merits of the question. In the first place, the masters deny that there is anything to arbitrate upon, their position being such that they could not, without serious loss, make any further advance in the meantime. But it is desirable to point out that the machinery called into operation by the masters at the request of their men, and constructed on the model of the system which governs the relation of the Durham coalowners and their employees, supplies all the essential elements of a court of arbitration. The main, if not the only important, difference between the two systems is this—that while a decision given by an arbitrator is invariably held to bind both parties, that of the joint committees appointed to investigate disputes arising between masters and men in the Durham coal trade is not final. It is, however, competent for the joint committees in merely local disputes to call in the services of an arbitrator by mutual consent, this being a distinction carefully observed between

local and district, or general, disputes, where no provision is made for arbitration in case the mineowners and the men should not agree. It will be apparent, therefore, that there is no good excuse for blaming the mineowners because they looked coldly upon the proposal to establish a court of arbitration, even although they had admitted that there was a fair basis for arbitration.

We have said that the masters deny the existence of any data which could be made the basis of arbitration. This statement may require some explanation. The mineowners of Cleveland are divided into two classes—those who are mineowners pure and simple, and those who combine mine owning with pig-iron making. Some of the latter firms are probably well able to give the advance sought for, because they are under no obligations to anyone except themselves—that is to say, they have entered into no contracts, or very few, to supply other works than their own with ironstone; but those who are mineowners, and nothing more, occupy a very different platform. Most of them have contracts now running that will not expire for three, four, or five years to come. These contracts were based upon the low prices that prevailed two or three years ago, when ironstone that now costs 7s. in the open market could be purchased for 3s. 6d. per ton, and not, as they should have been, upon the prospective value of materials. The consequence of this is, that between increased wages on the one hand, and an enhanced royalty on the other, several of the largest mine owning firms are in a very awkward predicament. We have heard of one large firm, turning out about a million tons of ironstone per annum, that actually suffers a loss on every ton of ironstone produced. The more fortunate mineowners are in honour bound to stick by those less happily situated; and hence it is that the masters, as a whole, repudiate the demands of the Union.

The probable effects of the struggle will be very serious, much more serious than either of the parties engaged in it seem to expect. It is almost certain to throw some 8000 to 9000 blast-furnace men out of employment within two or three weeks, and as the stocks of pig-iron are very low—not equal indeed to more than a week's supply of local finished iron manufacturers—the malleable ironworks throughout the district will in turn be closed, thus throwing idle some 18,000 to 20,000 additional men. The limestone quarrymen, of whom there are about 2000 employed in working the stone required as a flux in the blast-furnaces, will not necessarily experience the same results all at once, but as the majority of them are already out on strike, and have been for three weeks past, their position cannot be made much worse by the turn that affairs have taken in the allied branch of the trade. Altogether it is an exaggeration to say that a month's struggle would throw 30,000 to 35,000 men out of employment, and inflict otherwise a grievous injury on the metallurgical industry of Cleveland.

## DYNAMITE.

Although Mr. STAVELEY HILL's motion for a Select Committee to enquire into the operation of the Nitroglycerine Act, 1869, as regards Dynamite, did not end in the immediate appointment of one, yet Mr. BRUCE in effect admitted the reasonableness of the complaints made against his own regulations. The case made by Mr. HILL, supported as he was by several petitions most influentially signed, was so strong that the Home Secretary could not openly resist the enquiry, but pleaded for delay on the ground that so many members are now serving on committees, and he promised to consent to a committee being appointed if the motion were renewed at the commencement of next session. We may, therefore, congratulate those mining friends who desire to avail themselves of the use of Dynamite on the prospect of the present vexatious and absurd regulations being shortly relaxed.

The debate was curiously illustrative of the way in which the interests of the public are dealt with under the guidance of the present head of the Home Office. Mr. HILL, in introducing his motion, necessarily referred to what took place when the Act was hurried through Parliament at the close of the session of 1869, quoting Prof. ABEL's famous letter, in which he described Dynamite as being quite as dangerous an explosive as Nitroglycerine itself, and urged the enforcement of *prohibitory regulations* against its importation, transport, and storage, which he declared would not be detrimental to the interests of mine and quarry owners, in consequence of the discoveries which had then lately taken place in the application of gun cotton as a blasting agent. Mr. HILL then proceeded to notice the fact that the House was at the time in ignorance that Prof. ABEL was the patentee of gun cotton, deriving a large income from royalties, and consequently directly interested in promoting its sale, and in restricting the use of other rival explosives; and in proof that he was so, quoted the official documents in Mr. FRANK'S able pamphlet,\* lately noticed in our columns, and which have been freely circulated amongst the members of the House. He also quoted Mr. ABEL's own lecture, delivered at the Institute of Civil Engineers, in May, 1872, and since published by the Council, wherein he describes Dynamite as being "one of the safest, most powerful, and most convenient explosive agents applicable to industrial purposes,"—thereby completely withdrawing and stultifying the statements in his letter, on the faith of which, Parliament was induced to extend the provisions of the Nitroglycerine Act to Dynamite and similar compounds. Mr. HILL further noticed that although the Act was entitled an Act to prohibit "for a limited period," &c., yet the clause contained in the original Bill, limiting its operation to one year, had been struck out on the motion of the Home Secretary, and the Act has now remained in force nearly four years, and will do so until repealed. The case for enquiry was complete and unanswerable. Parliament had been misled by an interested person, who held office under Government, and who now admits the incorrectness of his statements. What more could be wanted, and how was the difficulty to be got over? Mr. BRUCE certainly showed considerable tact in drawing away the attention of the House from the main question. On rising to reply he professed great indignation at its being supposed that Prof. ABEL was the adviser of the Home Office, and asserted that it was a pure invention, without the slightest shadow of foundation; and, moreover, he had not received any notice of this attack on Mr. ABEL, and was, consequently, not prepared to rebut it; and after admitting the propriety of the motion, and stating his willingness to consent if a committee could now be formed, he urged the difficulty of getting members to serve on one at the present time, and proposed that the motion should be renewed the beginning of next session; and he further most strangely asserted that the late revocation of the old licenses granted by him, and the substitution of others, was done with the intention of *relaxing the restrictions* which the old licences contained, and which he, in effect, admitted were too stringent. Every other member who rose, with the exception of Sir HENRY STOKES, spoke in favour of Mr. HILL's motion. Sir HENRY was seated by the side of Mr. BRUCE, and, after some conversation with him, rose and expressed some indignation at its being supposed that Mr. ABEL could now retain any interest in the royalties under his patents, and declared that it was impossible for him, as an honourable man, to do so; and he then went on to assert that a case of Dynamite had fallen from a railway truck, and exploded, but without venturing to state when or where this alleged accident occurred, the fact being that nothing of the kind ever took place, and the statement is a pure invention without the slightest foundation, originating, we have every reason to believe, in the fertile imagination of some gentleman at the Home Office as an excuse for the restrictions complained of, and this, after the severest tests have been made by the Government Gun cotton Committee to prove that a case of Dynamite will not explode from a fall on hard rock from a great height, or even when smashed to pieces by heavy weights falling on it. This was conclusively shown by the experiments at Llanberis, and near Glasgow.

Seldom has so short a debate so completely puzzled its hearers. The Home Secretary, while he indignantly denied that Prof. ABEL was the adviser of the Home Office, expressed equal indignation at what he considered to be the attack made on the Professor, such attack consisting chiefly in the quotation of his letter, and contrasting its statements with those contained in his subsequently published lecture.

\* "Government Bamboozled." A Pamphlet showing the Scandals of Woolwich Arsenal, and the Influence upon the Home Office. By R. S. FRANK. London: A. Tindal Atkinson, Buckingham-street, Strand.

But the vehemence of Mr. BRUCE's indignation seemed to belie his words, and, notwithstanding his repudiation of Mr. ABEL as his adviser, conveyed to his hearers the impression that the two were identical in some mysterious and hidden way; and so it subsequently appeared, for later on in his observations he let slip that though Mr. ABEL was not the original adviser appointed by the Home Office, yet he was the indirect adviser, through the medium of the War Office. A nice distinction, no doubt, and one that will be appreciated by those who are deprived of the use of Dynamite because a Government official is interested in gun cotton, and the works at Stowmarket are re-erected.

The strangest part of Mr. BRUCE's statement was, however, his assertion that the new licenses are a relaxation of the restrictions contained in the original licenses. This statement is so completely at variance with the fact that we can only suppose Mr. BRUCE has himself been grossly imposed on by some of his assistants and advisers, and that the advertisement lately published bearing his signature was either not signed by him, or that he was in absolute ignorance of its contents when he appended his name. The letter published in our columns on Feb. 22 last, under the signature of "A Practical Man," sets forth at length the difference between the old and new licenses, and wherein the new licenses instead of relaxing the restrictions in the old render them far more vexatious and oppressive. The original licenses enabled the holders to transport 1 ton of Dynamite in an ordinary conveyance, and the new licenses restrict the quantity to 5 cwt. only. The new licenses impose on the holders and users of Dynamite the responsibility of having only such Dynamite in their possession as is mixed with certain specified materials, and in exact proportions; and in a particular way, and by chance any Dynamite shall be found in their possession not in strict accordance with the regulation, although the fault may arise from the neglect or improper conduct of the manufacturer, yet the innocent user is to be subject to the full penalties mentioned in the Act. Again, the holder of one of these new licenses is not to be at liberty to dispose of a single cartridge to a neighbour unless the latter has himself obtained a license from the Home Office, and this will not be granted unless he has erected a suitable store, although he may never require to place any Dynamite in it; and the holder of a general license can only use Dynamite on his own premises, and may not assess a neighbour, or make an experiment in his works, without incurring the full penalty mentioned in the Act. All these and other vexatious restrictions were not in the original licenses. If these new licenses do not originate from Mr. ABEL himself they, at all events, have been conceived in the spirit of his letter, wherein he advised the enforcement of *prohibitory regulations*. It is, of course, impossible for any sane person to contend that they are, or can be considered as, a relaxation of the restrictions contained in the old licenses; and the necessary consequence follows: either Mr. BRUCE is altogether ignorant of the contents of these licenses, or he openly in the House made a statement which he knew to be untrue. This latter supposition we cannot for one instant believe to be the case; and we only trust that, in the interest of those engaged in mining and quarrying pursuits, Mr. BRUCE will be induced to enquire how it is that he has been so completely misled. We must assume from his statement that his intention was to relax the restrictions contained in the old licenses, and if so why have his instructions not been carried out? Instead of the restrictions being relaxed they are rendered far more obnoxious and offensive than heretofore—so much so, that in some cases they amount to positive and absolute prohibition.

The fact that these new restrictions are issued just at the time when the Stowmarket Gun cotton Works are re-built necessarily creates a most disagreeable impression amongst those who are most interested in the subject, and the sooner the Home Office looks to the matter the better. Facts are stubborn things. No accident whatever has hitherto taken place in the carriage or storage of Dynamite, either in this country or abroad, although it has been carried in large quantities immense distances, by rail, ship, and on public roads in common carts, yet the most stringent and absurd restrictions are placed on it in this country. Again, no accident has ever arisen from the legitimate and ordinary use of Dynamite, the only accidents which have arisen, and they are very few, have been where it has been placed on heated stoves or steam-pipes, where no one would think of placing either gunpowder or gun cotton. On the other hand, innumerable accidents have arisen, and constantly take place, from the use of both gunpowder and gun cotton—the latter of which is unquestionably more sensitive and liable to explode from friction or concussion than Dynamite, and has been so found by the Gun cotton Committee, yet it is favoured, and remains free from all special legislative restrictions. This ought not to be made a question between rival manufacturers. It is one in which the public are most deeply interested. In numerous cases, such as the sinking of shafts through hard ground and wet rock and ground—as, for instance, at Sandwell Park Colliery—Dynamite stands alone, and the complaint is that parties who desire to use it cannot do so in consequence of these prohibitory regulations.

We live in an age when the protection of life and the welfare of the labouring classes is, on the whole, more studied and considered than at any former period, and, on the score of humanity alone, it is monstrous that Parliament should have been induced, on the advice of a Government official, to pass this Act to restrict the use of what he now admits to be one of the *safest* explosives; and it is still more discredit that the Home Office, after this admission, so candidly and clearly made, should not only continue but actually redouble the restrictions, and thereby compel mine and quarry owners, against their will, to use the more dangerous explosives. Again, one of our greatest sources of wealth arises from our minerals. The cost of labour, particularly amongst our miners, has greatly increased, and our neighbours on the Continent are underselling us. A patriotic Government might be expected to render additional facilities for the use of one of the most powerful and economical explosives, but, instead of this, our Government, under the guidance of the present HOME SECRETARY, throws the greatest impediments in the way of its use.

## PUDDLING BY MACHINERY.

ROTATING FURNACES, OR MACHINE PUDDLING TOOLS.

That the practicability of puddling by machinery has now been demonstrated is acknowledged by most men who are intimately acquainted with the iron trade, and the opinion is almost equally unanimous that none of the furnaces yet brought forward give such results as will ensure their general adoption. There is, moreover, another question as to whether the principle of the rotating furnace is that from which ultimate success is to be expected, or whether the principle of mechanical puddling tools is not preferable. Much may, of course, be said on both sides, but until far more numerous trials have been made no reliable conclusion can be drawn. The rotating furnace is extremely simple no doubt, and no less an authority than Mr. EDWARD WILLIAMS stated at the recent meeting of the Iron and Steel Institute that the quality of the iron produced was superior to that made by the ordinary process of puddling, although the price of puddling was somewhat higher, and certain difficulties remained to be surmounted; but it seems that the quality and character of the raw material must be very perfectly known in order to obtain anything like uniform results. The reason of the superiority of machine puddled iron was very clearly pointed out in the course of the discussion in which Mr. WILLIAMS's remarks just mentioned were made. The attempt has been made to perform the puddling operation with too little labour when manual exertion has been relied upon, and inasmuch as with the machine the difference in the time required fully to work the iron is inappreciable, the machine puddled iron has received the proper amount of manipulation.

But every rotating furnace has, in the opinion of most practical men, the disadvantage as compared with hand-puddling that the state of the iron cannot be felt by the workman, and that, consequently, the effect of the judgment of the puddler is altogether lost. It is to combine the advantages of machine and hand-puddling that the system of mechanical puddling tools has been proposed, and in the Supplement to this day's Journal Mr. B. BAYLISS, whose name is already known as the author of a useful little book on puddling,



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May 22.—The shipping trade on the Tyne has been extremely quiet of late, there having been a falling off to a very marked extent in the demand for all the leading staples of the district. The supply of coals continues to increase, while the consumption is less, and prices are consequently drooping; still, the fall in price is not great as yet. Manufacturing coals are still from 14s. to 18s. at the pits, and house coals 20s. per ton. The demand for coke for the iron furnaces in the Cleveland district, and the extensive ironworks in Cumberland, keeps the South Durham coal field pretty brisk, and there is less appearance of depression there than in any coal mining district, perhaps, in the county at present. The coke for sale here still brings 42s. per ton. Of course, these remarks are without reference to the exceptional circumstance of a strike amongst the Cleveland iron ore workers. The sudden stoppage of a considerable part of these mines, owing to a further demand for increased rates, which the masters have refused to concede, is a very grave circumstance indeed in connection not only with the coal, but also the iron and many other trades. This very untoward circumstance has caused a panic in the coke trade during the present week, but few parties will yet be inclined to sell under 40s. per ton; 30s. has been offered by some parties, but this has been accepted by very few indeed. Although the number of miners out at present is very considerable, yet a great many remain in, and it must be borne in mind that iron ore is now brought from many districts, and various countries. It is not expected that the strike of the Cleveland miners will affect very seriously any district,



with the exception of the Tees, although that is, of course, a most extensive ironmaking district.

On the Tyne and Wear ore is derived from Ridsdale, from Cumberland, and also from various points on the Continent, and from Cornwall, and great exertions are now making to secure a sufficient supply, so as to keep all the furnaces in blast, and there is little doubt that those efforts will prove successful so far as the Tyne and Wear are concerned, and, to a certain extent, the furnaces on the Tees may, no doubt, be kept in blast, as a considerable supply of ore can be got from Northampton and other Midland counties.

The total number of furnaces in blast, according to the latest returns, in the entire district, including the Tyne and Wear, was, previous to this rash and impolitic strike, 135, and of this number 127 were in operation, and only 8 out of blast. Of this number 91 are in the Middlesbrough and Stockton district, and the make there during last month was 165,000 tons. At most of the furnaces in that district only small stocks of ore are held, with some exceptions. It is hoped that the men will not persist long in their present course; as to the masters conceding any further advances, there is no probability at all of such a course being taken.

The general trade of the district, as remarked above, is very quiet; the engine, foundry, and chemical works, indeed every branch, without exception, have experienced a dearth of new orders to any considerable extent of late. The Steam Coal Trade in Northumberland has also been very quiet, and stocks are accumulating at many of the works, but this causes no alarm there, as the coal is of a very hard nature, and large stocks are often held.

All the new coal fields lately offered in this district have been taken up, and another is now offered in the Bellingham district; the North British Railway passes through it, and it is, therefore, probable that it also will be shortly taken up. The extent of the royalty there offered is 3000 acres. As noticed in this letter, an extensive colliery is shortly to be opened near Whitburn, on the sea coast between Sunderland and Shields. Coals are intended to be worked here on an extensive scale, a large area having been leased from the Ecclesiastical Commissioners; and, in addition to this, it is expected that a large quantity of coal will be got underneath the German Ocean. A number of farms have been purchased for the purpose of securing sites for the shafts, dwelling-houses for the workmen, and railway facilities. The coal field will be connected by a short line with the Sunderland branch of the North-Eastern Railway, and the coals can be shipped either at the Tyne Docks or at the docks on the Wear at Sunderland. This extensive concern is to be carried out by a company formed lately, part of the proprietors being owners of the Harton Colliery, and other influential gentlemen have joined them. The management is to be in the hands of Mr. John Daglish, manager of the new winning at Silkworth, and formerly manager of the Hetton and other extensive collieries. It is understood that winding-engines will be erected here of larger size than any yet used in coal mining operations.

Mr. Thomas Davis, on the occasion of his leaving the employ of Messrs. C. M. Palmer and Co., to take charge of extensive works at Youngstown, Ohio, America, has been presented with a gold chain and medal with suitable inscription, also a purse of gold, as a mark of the esteem of his fellow-workmen.

THE NEWCASTLE CHEMICAL WORKS AT THE VIENNA EXHIBITION.—At the Vienna Exhibition are a number of specimens of the productions of the Newcastle Chemical Works, and there is given away to the visitors a little book, printed in different languages, which conveys an excellent idea of the character and extent of this undertaking. The company is now one of the largest of its kind in the world, and the stages by which it reached to this elevation abound in interest. In 1849 Mr. Allhusen, in conjunction with another, originated the business. In 1848, the firm became C. Allhusen and Co., and afterwards C. Allhusen and Sons. On January 1, 1872, the whole business passed into the hands of the Newcastle Chemical Works Company (Limited), with the result that for the year 1872 a dividend and bonus of 25½ per cent. was paid to the shareholders. When the company took the business the property extended over an area of 137 acres, of which 50 acres were covered with buildings and intersected with railways and telegraphs. During the past year additions have been made which cover 7 acres more. The works are kept going night and day with the aid of 2800 workmen, and of steam equal to 2400 horse power, all of which is most economically used, inasmuch as all the works are connected by railways and telegraphs. The store-rooms and sheds will hold 80,000 tons of raw materials, and 500 ships annually arrive from different parts of the world at the company's works freighted with produce. During the year 1872 the company consumed 35,000 tons of salt, 150,000 tons of coals, 47,000 tons of chalk, 15,000 tons of limestone, 23,000 tons of pyrites, 2700 tons of manganese. The total quantity of chemicals produced in 1872 was 52,300 tons. This is in marked contrast with the extent of the first year's business, in 1849, when only 1450 tons were produced. The productions are very well known all over the world, and medals were obtained at the International Exhibitions at Paris in 1855 and 1867, and in London in 1862, and probably another medal will be obtained at Vienna. Apart from all the buildings necessary for the manufacturing operations, there are workshops of all kinds, renewals, new buildings, plant and tool making being chiefly done on the premises.

#### REPORT FROM SCOTLAND.

May 21.—A decided improvement took place in the Warrant Market towards the end of last week, and the price advanced to 117s. 6d., closing on Friday afternoon at 116s. 6d. Notwithstanding the advance in the rate of discount to 6 per cent., which took place on Saturday, the market remained very steady all Monday, and a good business was done at about 117s. Yesterday the tone was flat, during forenoon sellers at 117s., and buyers very cautious, but during the afternoon there was more enquiry, and business was done up to 117s. 6d., which was the closing quotation. To-day the market opened very firmly at 118s. 6d., but during the course of the day gradually receded to 117s. 6d., closing sellers at that price. The market derives its strength at present principally from the extraordinary position of the labour market. In Middlesbrough many of the miners have ceased work, and furnaces, in consequence, are being "damped;" while here the colliers have assumed a threatening aspect over a dispute with their employers regarding the application of the new Act of Parliament now in force. The local Malleable Iron Trade is very dull, but the shipments are good, and the stock in store is being rapidly reduced. There is little chance to report in makers' prices:—

	No. 1.	No. 2.
Garthferrie at Glasgow (deliverable alongside).....	135s. 0d.	118s. 0d.
Coltness ditto ditto.....	137 6	119 0
Summerlee ditto ditto.....	135 0	119 0
Carnbroe ditto ditto.....	125 0	118 0
Monkland ditto ditto.....	125 0	118 0
Clyde ditto ditto.....	125 0	118 0
Govan, at Broomielaw ditto.....	120 0	117 6
Langloan ditto ditto.....	135 0	118 0
Calder, at Port Dundas ditto.....	140 0	120 0
Glenzarnock, at Ardrossan ditto.....	125 0	119 0
Eglington ditto ditto.....	118 0	116 0
Dalmellington ditto ditto.....	119 0	115 0
Carroll, at Grangemouth, selected, ditto.....	135 0	118 6
Shotts, at Leith ditto.....	135 0	118 0
Kinnell, at Boness ditto.....	125 0	118 0
Bar Iron.....	£13 10 to £14 0	
Nail rods.....	14	

	SHIPMENTS.
Week ending May 15, 1872.....	Tons 25,560
Week ending May 17, 1873.....	17,493
Decrease.....	6,067
Total decrease since Dec. 25, 1872.....	197,082
Imports of Middlesbrough pig-iron into Grangemouth:—	
Week ending May 15, 1872.....	Tons 800
Week ending May 17, 1873.....	435
Decrease.....	365
Total decrease for 1873.....	2094

The strike and lock-out in the ironstone district of Cleveland, if indefinitely prolonged, may have an adverse effect on this district, as ironstone is scarce as it is, and prices rule high for native or imported of good quality. Under these circumstances it is gratifying to learn from last week's Journal that an extensive mineral concession, extending to about 2500 acres, on Lord Poltimore's estate in North Devon, has been obtained by a Glasgow firm—Messrs. Granger Brothers—who have been so fortunate as to discover upon it what promises to be an immense deposit of exceedingly rich and pure spathose ironstone. The district in which it occurs is near the western extremity of Exmoor, about ten miles to the east of Barnstaple, and only some three or four miles to the north of the Devon and Somerset Railway. This sparpyrite is chiefly valuable for the facility with which it can be converted into steel.

Finished iron is in much the same position as last reported, the advance in pigs rather preventing the floating of orders. It is reported that one of the largest malleable works in this vicinity is likely to be converted into a limited company, arrangements being already pretty well matured for that purpose. This work has hitherto

been prominent for its large appliances and the undaunted enterprise of its proprietors, and if worked with skill and economy may prove a successful venture. Engineering and ironfounding is reported quieter, and the brass and copper workers are hardly so brisk.

The coalmasters for a few miles to the east and south-east of the city have this week reduced their prices by 3s. a wagon (24 cwt.), with the view of reducing wages 1s. per day. A special meeting of the colliers has been called to consider the propriety of resisting the reduction. While this is the case all descriptions of coal brought to town by rail are as last quoted, but it is likely they will shortly be reduced in price also. Coke and gas coal are in good demand at high prices, and contracts are wanted for parrot gas coal in quantity in this market. The shipments of coal for the week amount to 37,652 tons; same week last year, 30,070 tons.

On Saturday we had—what is now becoming a standing institution—a miners' conference, at which the usual district reports were read and discussed. Mr. Alexander McDonald delivered an address on the mutual relations of mineowners and miners in regard to the "Special Rules," and denounced the proposal of placing the responsibility of timbering upon the men. In regard to the future he proposed that the miners continue at work until June 1, when, if no meeting could be got or arranged for with the masters, or if the meeting failed to accomplish what they desired, then they should burn their powder at the last moment, and burn it in such a way as would burn up those "Special Rules" altogether. This was agreed to, and the meeting separated.

The "Special Rules," about which such a noise has been made, appear to be framed in strict conformity with the recent Act, and the miners have been prompted to object to them because they do not contain the "specialties" peculiar to the Durham and Northumberland mines, which require special adaptations for their successful working on account of the height of roof, &c. The miners may be induced to burn the "Special Rules" at the bidding of their spirited secretary, but it is hardly to be supposed that even if they do any Government will be found foolish enough to impose rules specially adapted for an isolated district on others which do not require them at the bidding of a clamorous host. Already 2800 Fifeshire miners are on strike against the rules as drawn, and if the 40,000 do not follow their example the secretary will have to be absolved of all shadow of blame.

Mining shares have, on the whole, declined this week—Shotts being in demand have improved 8½. Tharsis decidedly better, but relapsed a little again; Merry and Cuninghame quoted 4s. higher; and Emmas, after several changes, close at about the same prices as this day seen high.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

May 22.—The Iron Trade of South Staffordshire continues in a languid state, owing to the wide margin still existing between the prices which merchants are disposed to give and those which manufacturers are prepared to accept. The difference varies according to circumstances, but it is the opinion of some that a reduction of 3s. to 4s. per ton will be necessary to secure a return of healthy business. No one can dispute the statement of the ironmaster when they affirm that an important reduction in the price of iron is impossible until the value of fuel has reached a much lower standard, and of this there is no immediate prospect. The ironmasters, who are in want of orders, are in many instances regulating their rate of production to suit the demand, in preference to securing business on terms which must prove unremunerative. In some cases slight concessions have been made by makers of medium quality iron; sheets (singles), for example, having changed hands at 17s., and bars at 13s. per ton. At the time we write no intimation of the reduction has been given by Earl Dudley, Messrs. Barrows, and the other leading firms who usually take the initiative in such matters. Business on change at Wolverhampton yesterday was exceedingly flat in all departments of the trade. The lower classes of pig-iron are easier to the extent of 10s. per ton, making cinder pig 5s. 10s., but the better qualities are firm, most of the makers having secured contracts which will carry them through the quarter. Complaints are still made of the great scarcity of native ironstone even at the high price of 25s. for raw and 35s. for calcined samples.

The present number of blast-furnaces blowing in the South Staffordshire district is 94, and 65 are standing idle. The total number of finished ironworks is 110, comprising 1700 puddling-furnaces and 282 rolling-mills.

The South Staffordshire Coal Trade is decidedly quieter this week, but the output having been proportionately reduced, no appreciable effect has been produced on quotations. The falling off in the demand is especially felt in the Cannock Chase district, where the collieries are mainly dependent on the requirements of coal for household and gas-making purposes.

The directors of the Sandwell Park Colliery Company, in announcing the sixth call to the shareholders (making 90s. per share paid-up), officially report that at a depth of 232 yards a second seam of coal has been sunk through about 11 in. thick, having a dip of 7 in. per yard, in a direction about south-east. The roof is white streaky sandstone, and the floor fire-clay. The coal cannot, however, be identified with any of the thin seams in the West Bromwich district. The sinking has since been through fire-clay, blue binds containing cakes of limestone, mottled binds, and fire-clay rock. Earl Dartmouth has consented to extend the time for completing the search, which would have terminated on Sept. 29 according to the original agreement, for a further period of 12 months.

The directors of the Cannock and Huntington Colliery Company (Limited) have concluded a contract with the Diamond Rock-Boring Machine Company to put down a bore-hole with the diamond drill to a sufficient depth to prove the coal measures. The depth stipulated is 200 yards, and it is expected that the work will be completed within a period of three months.

The Dudley Institute of Mining Engineers will during the summer visit the Cannock Chase, Nottinghamshire, and Wigan coal fields. The first excursion (to Cannock Chase) is fixed for next Monday.

In North Staffordshire the demand for finished iron is not nearly equal to the producing power of the district. Quotations are easier, and the official list is merely nominal, manufacturers, as a rule, making their arrangements as best they can without reference to the document. Crown bars are 13s. 10s., with proportionate rates for other descriptions. The American demand is very quiet, and without prospect of early improvement. The coal trade is much quieter, and prices have a downward tendency. The recent strike of colliery enginemasters in the employ of Earl Granville, Mr. Bowers, and the Chatterley Company have had the effect of reducing the output of coal in the district. The movement originated in a demand for more pay and fewer hours, to which the enginemasters declare that they are entitled. A new and valuable seam of coal has been discovered at Hanley at a depth of 600 yards. The number of colliers now working in the North Staffordshire coal field is estimated at 12,000.

SANDWELL PARK COLLIERY TRIAL SINKING.—Mr. Henry Johnson, the engineer and secretary, has issued the following Circular to the shareholders:—"I am requested by the directors of this company to report you that at a depth of 232 yards a second coal has been sunk through, about 11 in. in thickness (the report in the bore-hole as being about 6 in. thick), having a dip of 7 in. in a direction about south-east, the roof being white streaky sandstone, and the floor fire-clay. The sinking has since proceeded in fire-clay, blue binds containing cakes of ironstone, mottled binds, and fire clay rock, to a total depth from the surface of about 242 yards, and there has been no water in the last 15 yards of ground. I regret to say I cannot at present correlate the above coal with any of the thin coals in the West Bromwich district, but quite expect the next coal struck will enable me to do so."

#### REPORT FROM LANCASHIRE AND CHESHIRE.

May 22.—Our Coal Trade is steadier than it has been for the last week or two, shipping requirements having been somewhat heavy. This has to some extent put a stop to the "stacking" of coal, but the demand has not yet affected the large stocks which during the last few weeks have been accumulating on the pit banks.

Two inventions are attracting considerable attention: one of these is the property of Mr. H. Williams, C.E., of Wigan, who is erecting at the Pemberton Collieries an apparatus for utilising the waste heat from coke ovens in the manufacture of soda ash from salt cake. The manufacture is carried on in the ordinary way, the invention applying solely to the utilisation of the heat which at present is allowed to escape up the chimneys. The saving is, of course, very great, and the furnace which is used can either be affixed to the top of existing ovens, or where a new coke plant is being erected; both furnace and ovens may be kept on the ground floor. The result so far is exceedingly satisfactory. Mr. Miles Williams, of the firm of Williams and Lamb, oil refiners, of Wigan, is the patentee of the second invention, which has for its object an improvement in the manufacture of gas by passing superheated steam and vapours of hydro-carbon, such as petroleum, over red-hot coke in a retort. So far, the experiments

show that the invention largely increases the illuminating power, and there is an immense saving in the cost of manufacture.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 22.—The lead mines in the Eyam district are going on steadily, the quantity of ore raised being about of an average character. In the higher grounds, also, there is no change calling for remark. The collieries are not by any means so busy as they have been, and prices have come down, good house coal being now obtainable at some of the pits at 12s. 6d. per ton. The tonnage going to the metropolis is not so large as it was a short time since, and a great many loaded wagons are to be seen at nearly all the railway stations, a proof that the demand is considerably less than the supply. From Clay Cross and Langley Mill, however, the tonnage is well kept up for the season, that is raised. At Unstone there have been some disagreements relative to wages, but through Mr. Normansell they have been bridged over. The development of the coal in Derbyshire is being pushed forward actively, and several small places which had been closed, having previously returned no profits, have been opened out again, and, under the altered state of affairs as relates to prices, they are going on swimmingly. At Dronfield, the Messrs. Lucas, who are busily engaged in the production of malleable castings and steel shovels, have sunk a new colliery, and reached the coal. At Unstone, Messrs. Rhodes and Son are making preparations to raise a very large quantity of Silkworth coal. The ironworks in all parts of the county are doing very well, both in plain and manufactured iron, whilst the Bessemer establishment at Dronfield is turning out a great deal of steel and rolling rails.

We have had but little change during the week in the various branches of the Sheffield trades, the heavy departments are particularly busy, and some very thick plates are being turned out at the Cyclops Works, some of them being 14 in., and weighing close upon 50 tons. They are for armour purposes, and on Government account. The business doing in gun-barrels, hollow castings, and crucible steel is very good. There is not much activity in general cutlery, the American order not having come so freely to hand of late. In the South Yorkshire district the House Coal Trade is by no means brisk, and large stocks are now to be seen at several collieries. Steam coal, however, is in good request. Several new collieries are in course of opening out.

The Dodworth Silkworth Coal Company is making preparations for working on a very extensive scale, and will now have three seams being got. A large number of coke-ovens has just been completed by Mr. J. Buxton, of Barnsley, who is devoting himself to the erection of ovens on an efficient and economical principle. At the Holmes a new shaft is being sunk to two thin seams, the Wathwood and Kent thick coal sinking has also commenced at Wath to the Barnsley coal, and operations will shortly be commenced at Cudworth and Darnley in the same direction. The Barrow Steel and Hematite Iron Company will also shortly be ready for sinking to the Silkworth coal, and it is intended to erect a very large number of ovens so as to make the coke for the use of the furnaces at Barrow. The ironworks in the Barnsley district are fully employed, there being a good enquiry for railway material, plates, sheets, pistons, and colliery castings.

The colliers who are on strike, and who live on Earl Fitzwilliam's estate, had a meeting on Tuesday night. Mr. Normansell said he was there for the purpose of submitting to the meeting a resolution passed at their council meeting at Barnsley on the previous day. That resolution was from a council which represented about 20,000 men, and he asked them to give it their calm and careful consideration. It was as follows:—

"South Yorkshire Miners' Association, Council Meeting, May 19. Resolved,—That the workmen now out of employment at the Stash Colliery be recommended by this council to apologise to Earl Fitzwilliam and Mr. Hartley for the manner in which they have laid the pit idle, and to apply for their work back again at the earliest opportunity."

After discussion, the resolution was adopted. The Parkgate Iron Company ninth annual report shows that the works and machinery had been maintained in an efficient state; that the new blast-furnaces had been working satisfactorily, and proved advantageous to the company. The directors recommend the payment of a dividend of 15s. per share, free of income tax. The balance sheet shows that the profit during the year ending March 31 was 53,000s. 14s. 6d., less 14,950s. paid as interim dividend, leaving 38,050s. 14s. 6d. now to be dealt with. To this is to be added 1517s. 1s. 10d., the profit brought forward from last year, less 100s. voted to auditors.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

May 22.—So far as the Iron Trade is concerned, this district seems perfectly clear at present from any disturbing influences. The men are working upon a 10 per cent. advance upon the late rate of wages, and they seem to be working with a will. Of course, it is uncertain how long this pleasing state of things will continue, but there is no reason at present to apprehend an eruption for some time to come. Monmouthshire and South Wales have just passed through a very trying time, and it would be little better than ruinous to many masters and men if a recurrence of such disastrous circumstances were to take place. It is, at least, gratifying to find that things are going on smoothly here now, while there is so much disaffection between masters and men in other iron-making districts. One can scarcely rejoice at one district benefiting by the misfortunes of another, but such is the case often with districts as with men. Cleveland, therefore, being perhaps the most immediate competitor with South Wales in the manufacture of railway iron, it is not improbable that South Wales might profit to some extent by the reverses of Cleveland. Happily, in this district the ironstone miners cannot exercise the power over the ironmasters that they seem able to do in the Cleveland district; for throughout Monmouthshire and South Wales the stocks of native ores are immense, and there is no doubt that some of the largest ironworks in the district could be kept going for 12 months or two years, even if not another ton of native mine were brought to the surface, so that on this score Welsh makers have nothing whatever to fear. It is, indeed, only in consideration of the miners themselves that the ironmasters have not carried out in full their intention to abandon several of the mines which are now being worked at a loss. But, apart from other districts altogether, the trade of this appears to be in a satisfactory state. Railway iron is in extensive request on account of South America, Russia, Germany, Sweden, Turkey, and other European markets; and, although enquiries come rather slow from the United States hitherto, some large contracts are looked forward to. Rail quotations continue fairly firm, but the lessening cost of coal and some raw materials enable makers to offer somewhat easier terms to purchasers than was expected. The works are now in full operation, and turning out the usual extensive quantities of finished iron, principally iron and steel rails. The exports are, therefore, large, and it may be mentioned that during the past week the following clearances have been effected:—The Rhymney Iron Company to Lisbon, 1520 tons; and Barcelona, 500 tons; Guest and Co. (Dowlais), to New York 515 tons, and Stockholm 300 tons; Ebbw Vale Company, to Genoa 1000 tons, and Cotrone 950 tons; Nant-y-Glo and Blaenau Company, to Königsberg 900 and 850 tons; Tredegar Iron Company, 1000 tons; and Blaenavon Company, to Königsberg 1000 tons. Tin-plate makers find it somewhat more difficult to effect sales at the quotations fixed at last quarterly meeting; but as some of the raw materials used and fuel are becoming lower in value, their position is not so embarrassing as otherwise it might be.

The Coal Trade, taking it as a whole, continues fairly active, but there is one branch which naturally suffers at this time of year. In May there is usually a decline in the demand for house coals, and this month proves no exception to the rule in that respect. But there is a question whether a reaction has not really set in in this branch. Prices have been reduced in some instances as much as 2s. 6d. per ton, and buyers seem confident that further reductions must take place, and that they will be able to purchase supplies at much lower rates in the course of a few months than they have been hitherto. Colliery proprietors, however, take quite a different view of matters, and are pretty sanguine that the present quiet is only temporary. Which will be right, of course, remains to be seen. As to the steam coal trade reports are still encouraging. The demand is well sustained, and prices are as firm as ever. The agitations among the colliers continue, like a disease, to break out here and there, but it may be said that the virulence of the epidemic has passed, for a time at least. There are no serious disputes at present, still they are such as to interfere more or less with the regular working of the collieries, and the output is limited in consequence. Liberal concessions are from time to time being made by the masters in the matter of wages.

Arrangements have just been made by the Newport Abercrom Black Vein Steam Coal Company (Limited), says the South Wales Evening Telegram, to sub-lease a portion of their property to the Patent Nut and Bolt Company (Limited), and it is expected that a handsome revenue will accrue to the Newport Abercrom Company from the arrangement. It is understood that the cutting of the first rod of the colliery will at once take place, and that sinking will be immediately and actively proceeded with.

A number of colliery owners have waited on the Home Secretary to obtain his approval of the "Special Rules" adopted under the Mines Regulation Act, and posted up at the collieries. Mr. Bruce made some slight alterations in the rules, and then gave his approval of them. Mr. Mostyn, the Government Inspector of Factories for Monmouthshire, has taken proceedings before the magistrates of Pontypool against the Ebbw Vale Steel, Iron, and Coal Company for three breaches of the Factories Act. The first was employing a boy named Cronin under age, without having registered his







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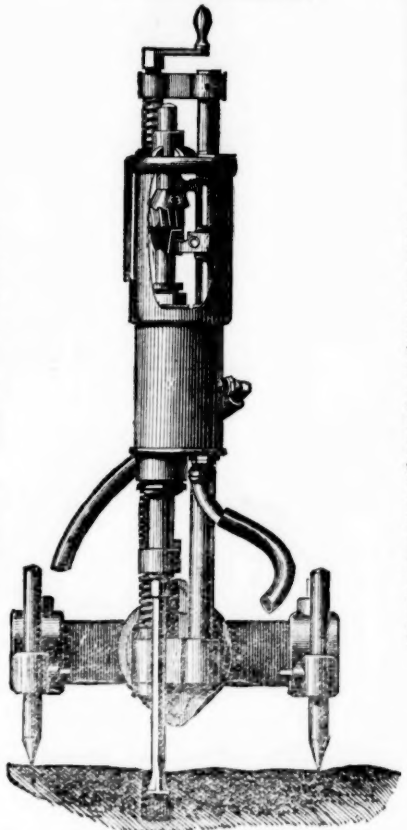
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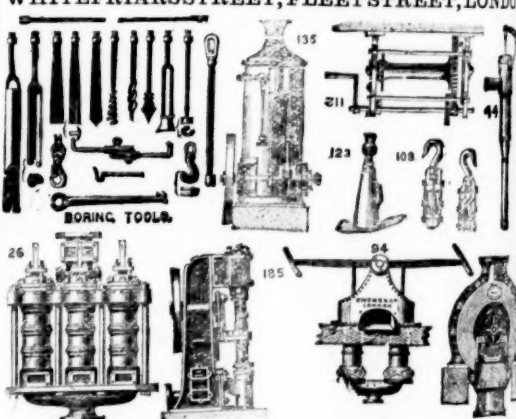
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## THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
15000	Alderley Edge, c. Cheshire*	10 00	—	—	11 11	8.00	5.00
20000	All-y-Crib, f. Talybont*	2 00	—	—	0 50	0.50	0.50
5800	Blair Caelan, s. Cardigan* (24 sh.)	3 10 00	—	—	0 50	0.50	0.50
18000	Boscawell Downs, f. c. St. Just*	3 00	—	—	619 15.00	5.00	0.00
200	Botalack, f. c. St. Just*	91 50	—	—	110 00	2.00	0.00
500	Bronfild, s. Cardigan*	100 00	—	—	2 80	0.00	4.00
4000	Brookwood, c. Buckfastleigh	1 16 00	—	—	4 16 30	0.12	6.00
3348	Cargill, s. Newlyn	4 15 11	—	—	1 40	0.00	0.00
6400	Cashwell, c. Cumberland*	2 10 00	—	—	0 80	0.00	0.00
7500	Castle-an-Dinas, f. St. Columb*	2 00	—	—	304 00	3.00	0.00
1000	Carn Brea, c. t. Illogan	35 00	—	—	11 17	0.00	7.00
2450	Cook's Kitchen, f. Illogan	19 14 9	—	—	116 10	0.00	12.00
10240	Devon Gt. Consols, c. Tavistock*	49 14 6	—	—	7 10	0.00	15.00
656	Ding Dong, f. Guilva	10 14 10	—	—	102 60	1.00	0.00
4266	Dolcoath, f. c. Camborne	10 14 10	—	—	0 13	0.00	0.00
10000	East Ballewidden, f. Sancreed*	1 00	—	—	80 15	0.00	0.00
6144	East Cardon, c. St. Cleer	2 14 6	—	—	14 19	0.00	0.00
300	East Darren, f. Cardiganshire	32 00	—	—	213 10	0.00	0.00
6400	East Pool, f. c. Illogan	0 9 9	—	—	13 11	0.00	0.00
5000	Exmouth, s. Christow	25 00	—	—	0 10	0.00	1.00
2800	Foxdale, f. Isle of Man*	3 10 6	—	—	0 13	0.00	0.00
3500	Gawton, c. Tavistock	10 14 9	—	—	0 30	0.00	3.00
40000	Glasgow Carn, c. (30,000 £1 p., 10,000 15s. p.)	4 00	—	—	15 11	0.00	0.00
15000	Great Laxey, f. Isle of Man*	4 00	—	—	15 19	0.00	2.00
5908	Great Wheel Vor, f. c. Helston	40 00	—	—	0 16	0.00	0.00
4000	Green Hurth, f. Cumberland*	0 6 00	—	—	0 16	0.00	0.00
10240	Gunnislake (Clitters), f. c.	5 20	—	—	0 20	0.00	0.00
1024	Herdsfoot, f. near Liskeard	8 10 00	—	—	62 50	0.00	0.00
5000	Hingston Downs, c. Calstock	1 00	—	—	0 31	0.00	0.00
25000	Killalee, s. Tipperary	6 4 00	—	—	0 30	0.00	0.00
6000	Killfrench, f. Chacewater	1 00	—	—	556 10	1.00	0.00
4000	Lisburne, f. Cardiganshire	18 15 00	—	—	0 12	0.00	0.00
2784	Lovell, f. Wendron	3 00	—	—	7 13	0.00	2.00
9000	Marke Valley, c. Cardon*	4 10 6	—	—	62 38	0.00	0.00
9000	Minera Mining Co., f. Wrexham*	5 00	—	—	0 17	0.00	0.00
20000	Mining Co. of Ireland, c. f. c.	7 00	—	—	0 17	0.00	0.00
6400	New Pembroke, f. c. Par Station	2 10 00	—	—	0 50	0.00	0.00
1000	North Hendre, f. Wales	10 12 00	—	—	4 13	0.00	0.00
2000	North Levant, f. c. St. Just	10 12 00	—	—	0 50	0.00	0.00
5694	Pedra-an-dred, f. Redruth	8 20	—	—	2 18	0.00	0.00
6000	Penhalla, f. St. Agnes	3 00	—	—	39 19	0.00	0.00
6000	Phoenix, f. c. Linkinhorne	4 34	—	—	1 12	0.00	0.00
1772	Polberro, f. St. Agnes	15 00	—	—	1 10	0.00	0.00
2000	Polidice, f. c. Gwennap	10 00	—	—	104 12	0.00	0.00
1120	Providence, f. c. Uny Lelant	10 87	—	—	1 19	0.00	0.00
18000	Prince Patrick, s. c. Holywell	10 00	—	—	0 14	0.00	0.00
5880	Rosewal Hill and Ransom	7 10 00	—	—	0 10	0.00	0.00
1000	Shelton, f. c. St. Austell	1 00	—	—	0 11	0.00	0.00
6000	Slimeford Dressing, f. Calstock*	1 00	—	—	708 10	0.00	0.00
512	South Cardon, c. St. Cleer	1 50	—	—	0 10	0.00	0.00
5000	South Carn Brea, c. t. Illogan	1 17 6	—	—	1 50	0.00	0.00
2000	South Darren, f. Cardigan*	3 8 6	—	—	1 50	0.00	0.00
2442	Spearhead, f. c. St. Just	38 17 9	—	—	0 10	0.00	0.00
940	St. Ives Consols, f. c. St. Ives	10 15 00	—	—	0 10	0.00	0.00
8771	St. Just Amalgamated, f. c.	9 10 00	—	—	0 30	0.00	0.00
12800	Tankerville, f. Salop*	0 00	—	—	0 30	0.00	0.00
25000	Terras, f. c. St. Austell*	1 00	—	—	44 3 6	1.00	0.00
6000	Trethick, f. c. Pool, Illogan	9 00	—	—	9 11	0.00	0.00
4000	Trumpet Consols, f. Helston	8 15 00	—	—	9 11	0.00	0.00
18000	Van, f. Llanidloes*	4 80	—	—	82 2 0	0.00	0.00
3900	W. Chiverton, f. Perranzabuloe	10 00	—	—	3 12	0.00	0.00
2448	West Wheel Frances, f. Illogan	28 12 9	—	—	0 30	0.00	0.00
25000	Wheel Arthur, f. c. Calstock	10 00	—	—	658 10	0.00	0.00
512	Wheel Basset, f. Illogan	5 26	—	—	14 2 8	0.00	0.00
5179	Wheel Grenville, c. Camborne*	7 14 6	—	—	0 10	0.00	0.00
2048	Wheel Jane, f. c. Kea	2 13 10	—	—	0 10	0.00	0.00
4265	Wheel Kitty, f. St. Agnes	5 4 6	—	—	0 10	0.00	0.00
2048	Wheel Kitty, f. c. Uny Lelant	3 10 6	—	—	0 10	0.00	0.00
804	Wheel Margaret, f. c. Uny Lelant	13 17 6	—	—	0 10	0.00	0.00
10000	Wheel Mary, f. c. St. Donato	10 00	—	—	0 10	0.00	0.00
1024	Wheel Mary Ann, f. c. Menheniot	10 00	—	—	0 10	0.00	0.00
1060	Wh. Mary Hutchings, f. Plympton	2 12 6	—	—	0 10	0.00	0.00
80	Wheel Owles, f. c. St. Just	70 00	—	—	0 10	0.00	0.00
12000	Wheel Russell, c. Tavistock	1 00	—	—	0 10	0.00	0.00
15000	Wheel Tregoss, f. c. Roche	1 00	—	—	0 10	0.00	0.00
10000	Wheel Whisper, f. c. Warleggan*	1 00	—	—	0 10	0.00	0.00
25000	Wicklow, c. s. f. c. Wicklow	2 10 00	—	—	52 9 00	0.00	0.00

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
35000	Alamillos, f. Spain*	2 00	—	—	1 18	0.00	2.00
130000	Almaden and Tinto Consol., s. f.	1 00	—	—	0 33	0.00	1.00
20000	Australian, c. South Australia	7 7 6	—	—	0 10	0.00	0.00
10000	Battle Mountain, f. c. (40 part pd.)	5 00	—	—	0 10	0.00	0.00
18000	Birdseye Creek, f. California*	4 00	—	—	0 70	0.00	0.00
6000	Bismarck, f. Germany*	10 00	—	—	0 94	0.00	0.00
12320	Burra Burra, c. So. Australia	5 00	—	—	56 00	0.00	0.00
20000	Cape Copper Mining, f. So. Africa*	7 00	—	—	11 15	0.00	0.00
40000	Cedar Creek, f. California*	5 00	—	—	0 26	0.00	0.00
30000	Central American Association*	0 15 00	—	—	0 60	0.00	0.00
15000	Chicago, c. Utah*	10 00	—	—	0 40	0.00	0.00
21000	Colorado Territorial, f. Colorado*	0 14 00	—	—	0 59	0.00	0.00
76182	Don Pedro North del Rey*	10 00	—	—	1 00	0.00	0.00
25000	Eschbacher and Aurora, f. Nevada*	10 00	—	—	3 12	0.00	0.00
5000	Emma, f. c. Utah (25,000 fully pd.)	20 00	—	—	2 40	0.00	0.00
70000	English and Australian, f. S. Aust.	2 10 00	—	—	0 30	0.00	0.00
15000	Ferguson, f. California*	2 00	—	—	3 12	0.00	0.00
30000	Flagstaff, f. Utah*	10 00	—	—	3 94	0.00	0.00
25000	Fortuna, f. Spain*	2 00	—	—	0 19	0.00	0.00
50000	Gold Run, f. c. Utah	1 00	—	—	0 10	0.00	0.00
80000	Kapunda Mining Co. Australia*	5 00	—	—	0 10	0.00	0.00
20000	Lead Chance, f. c. Utah	5 00	—	—	14 00	0.00	0.00
15000	Linares, f. Spain*	3 00	—	—	1 11	0.00	0.00
7837	Lusitania, Portugal* (45 shares)	3 00	—	—	0 50	0.00	0.00
15000	Mammoth Copperworks of Utah, f. c.	10 00	—	—	0 40	0.00	0.00
5000	Mountain Chief, f. Utah*	1					